

RUNNING HEAD: Attenuating Desirable Responding

Attenuating Desirable Responding: A Comparison  
of Self-Compassion and Self-Affirmation Strategies

by

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## Abstract

Research has shown that desirable responding can be detrimental to social relationships, achievement and health. This study used an experimental design to (a) induce an increase in desirable responding through threat to self-image and then (b) compare the effectiveness of self-compassionate and self-affirming writing in attenuating that increase. Control groups included no threat exposure, threat exposure alone and threat exposure plus neutral writing. Desirable responding was measured along two dimensions: self-enhancement and exaggerated virtue. Results show the threat did not result in the predicted increase in desirable responding so the effectiveness of the two strategies with regards to attenuating increases in desirable responding could not be examined and compared. However, results do reveal a difference in the mechanism of these two strategies. Engaging in self-compassionate writing resulted in a significant decrease in exaggerated virtue whereas being self-affirmed resulted in a significant increase, suggesting a possible benefit of a self-compassion strategy.

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## Attenuating Desirable Responding: A Comparison of Self-Compassion and Self-Affirmation Strategies

The tendency to see oneself more positively than is objectively warranted is widespread, both in terms of occurrence and in terms of the variety of abilities and talents in which this inflated self-rating, or desirable responding, occurs. We rate ourselves as: smarter, fitter, stronger, and healthier; more generous, honest, mature, creative and positive; less likely to steal and litter; and, less prejudiced than the “average other” (Alicke & Govorun, 2005; Dunning, Heath, & Suls, 2004). Whether this desirable responding is adaptive or maladaptive for the individual is unclear. Taylor, Lerner, Sherman, et al. (2003) found a positive self-view, warranted or not, was associated with good mental health and with being liked by peers. Others have found an unwarranted positive self-view is correlated with inter-personal costs such as anti-social behaviour (Sedikides, Horton, & Gregg, 2007) as well as poor social skills, hostility, and irritability (Colvin, Block, & Funder, 1995). For those individuals or situations for whom or in which desirable responding results in negative outcomes, a method of eliciting a more realistic self-view would be a useful tool to have.

In this thesis I argue that self-compassion and self-affirmation are two strategies that have shown promise in their potential to reduce desirable responding. Using an experimental method these two strategies were compared to a number of control conditions in order to assess how the two interventions might modulate any change in desirable responding resulting from a threat to self-image. Change in desirable responding was measured along two dimensions, self-enhancement and exaggerated virtue, using the Self-Deceptive Enhancement (SDE) and Impression Management (IM)

scales of the Balanced Inventory of Desirable Responding (BIDR; Paulhus & Levitt, 1987; Paulhus, 1991).

### **Desirable Responding**

Desirable responding has been defined as “the tendency to endorse items in response to social or normative pressures instead of providing veridical self-reports” (Ellingson, Smith, & Sackett, 2001, p. 122). Another way to describe it is to say that we tend to rate ourselves as better than others see us (Kwan, John, Kenny, Bond, & Robins, 2004). Paulhus (Paulhus & Trapnell, 2008; Paulhus and John, 1998) separated desirable responding into two different dimensions, agentic and communal<sup>1</sup>. An overly positive agentic response is to self-enhance by seeing oneself as more skilled, talented, competent, powerful, certain and successful than one actually is. An overly positive communal response is to exaggerate one’s virtue by seeing oneself as unrealistically moral, exceptionally loyal, law-abiding and virtuous (Loonqvist, Verkasalo, & Bezmenova, 2007). In this study, desirable responding will refer to an overly positive view of the self, including both self-enhancement (agentic) and exaggerated virtue (communal).<sup>2</sup>

Examples abound of desirable responding. At the University of Nebraska, 68% of faculty ranked themselves in the top 25% for teaching ability (Cross, 1977). Neal and Brazerman (1985) found lawyers have an unrealistic confidence in the likelihood of winning their cases and Odeon (1998) that the majority of traders believe they are

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<sup>1</sup> Developed by Bakan (1966) communion and agency are labels used to describe two basic modes of living, one focused on developing ties to a community and embedding oneself with it, the other focused on developing the self and on individuation.

<sup>2</sup> It is recognized that it can be socially desirable, in some situations for some individuals, to self-diminish. However, desirable responding as conceptualized in this study, does not include self-diminishing desirable responding. This study is concerned with desirable responding that is self-enhancing.

significantly more skilled than the average other trader. Most people rate themselves as having a healthier lifestyle than others (Hoorens & Harris, 1998). Eighty percent of drivers place themselves in the top 30% percent of driving skill (Svenson, 1981). When recognizing their own face approximately 55% of people showed a bias towards selecting an attractively morphed version of their face as their actual face, compared to 23% who chose their actual face and 22% who choose an unattractively morphed version (Epley & Whitchurch, 2008). Individuals generally rate themselves as more positive and punctual, less naïve or inconsistent, than peers (Suls, Lemos, & Stewart, 2002). We see ourselves as being an above average team member, working harder and contributing more than others in the group, often more than is logically possible (Ross & Sicoly, 1979). We even see ourselves as less prone to positive self-illusions than others (Pronin, Gilovich, & Ross, 2004). Williams and Gilovitch (2008) found that these overly positive views of oneself were not mere wishful thinking or conscious exaggeration. People were so confident in their self-rankings that they were willing to bet on them and to do so when winning was only possible if the self-ranking was very accurate.

**Desirable responding - adaptive or maladaptive?** There are opposing views in the literature as to whether desirable responding is beneficial or problematic for psychological well-being. Taylor (Taylor & Brown, 1988; Taylor, et al., 2003) found that positive self-illusions were related to feelings of well-being, more effective behaviour and greater success. In a later study, desirable responding was positively correlated with a number of mental health indicators, with clinical assessments of good mental health and with positive ratings by friends (Taylor, et al., 2003). In the aftermath of the death of a spouse, of the civil war in Bosnia and of the terrorist attacks of September 11<sup>th</sup>, desirable

responding (as determined by a self-peer discrepancy score) was positively correlated with resilience and adjustment (Bonanno, Field, Kovacevic, and Kaltman, 2002). In a follow up study several years later, desirable responding at the time of the September 11<sup>th</sup> terrorist attacks continued to be positively correlated with resilience and adjustment (Bonanno, Rennieke, & Dekel, 2005).

On the opposing side, Paulhus (1998) found that although desirable responders make a good first impression, over time their charm wears off and they are perceived negatively. Neal and Brazerman (1985) reported that over-confidence was correlated with lower levels of concessionary behaviour and with poorer negotiated outcomes than those with more realistic levels of confidence. Odeon (1998; p. 1916) noted “overconfident traders do not share risk optimally, they expend too many resources on information acquisition and they trade too much.” In an academic setting, Robins and Beer (2001) found that a bias towards desirable responding showed some benefit in the short term with higher levels of self-esteem and well-being as compared to those without this bias. However, over time, this desirable responding was associated with decreasing levels of self-esteem and well-being. This downward trajectory was not observed for those with accurate self-perceptions. And, contrary to the findings of Taylor and colleagues (2003), Robins and Beer found unwarranted positive views of the self did not lead to higher grades or a greater likelihood of graduating. As well, they found that desirable responders began to disengage from the academic process, rating grades as progressively less important as failures to achieve unrealistic goals accumulated. Another sign that there may some long-term cost to desirable responding comes from the friends and relatives of those who scored high on desirable responding at the time of the September 11<sup>th</sup> terrorist

attack. Those who were rated by friends and relatives as high on desirable responding at the time of the attacks were more likely to be perceived, several years later, by the same friends and relatives as having deteriorating social relationships and decreased honesty (Bonanno, et al., 2005).

Peterson and colleagues (2003) found that those who score high on self-enhancement are less responsive to negative feedback, even when there is increasing evidence of error and concrete loss. They suggest that this failure to moderate response stems from a “rigid devotion to the rightness of one’s current plans and beliefs (p. 218).” It is clear that the failure to be sensitive to corrective information, for instance continuing on a path until one has lost all one’s money, is not going to be adaptive for the individual.

An overly positive or unwarranted positive view of the self is one of the factors that comprise the personality trait of narcissism (Ames, Rose, & Anderson, 2006; Hepper, Gramzow, & Sedikides, 2010). Scoring high on dispositional narcissism was found to be significantly correlated with thinking highly of oneself and of one’s abilities (Emmons, 1984; Gabriel, Critelli, & Ee, 1994). John and Robins (1994) found a substantial association between the aggregate of a variety of generally accepted narcissism measures and an overly positive view of the self. Farwell and Wohlwend-Lloyd (1998) found high levels of narcissism correlated positively with three aspects of desirable responding including overly favourable predictions of final grades, over estimated current grades, and over attribution to their own ability and effort of group task success. These observed relationships between the personality trait of narcissism and desirable responding suggest that, to the extent that unwarranted high positive self-views are a component of narcissism, the negative outcomes found for those scoring high on a

measure of narcissism may also be found for those scoring high on a measure of desirable responding. Examples of these negatives are the tendency to be quick to see oneself as having been treated unfairly by others (McCullough, Emmons, Kilpatrick, & Mooney, 2003) as well as to be more likely than non-narcissists to be seen as manipulative, deceptive, unfaithful and dishonest by their romantic partners (Campbell, Foster, & Finkel, 2002).

Twenge and colleagues (Twenge & Foster, 2008a, Twenge, Konrath, Foster, Campbell, & Bushman, 2008b, 2008c) report evidence that narcissism levels rose in the general population between 1979 and 2006. Their meta-analysis of 85 studies of college students showed that roughly two-thirds of recent college students scored above the mean 1979-1985 narcissism score. This translates into a 30% increase. Similar concerns have been expressed by social commentators such as Christopher Lasch (1979) who argue that the rise of narcissism has brought about a decline in civic engagement and common courtesy. To the extent that desirable responding and narcissism are linked, an increase in the incidence of narcissism suggests an increase in desirable responding among college students over the same period.

**Reducing desirable responding.** Although there clearly remains debate about just when desirable responding will be adaptive or maladaptive, given the evidence that it is maladaptive at least some of the time, it may be useful to consider how desirable responding might be reduced. To do so, it is necessary to consider what may be causing desirable responding.

Some theoretical explanations of desirable responding posit that it reflects dysregulation within the normal, healthy tendency to maintain positive self-esteem or

self-image. Specifically, according to Morf and Rhodewalt (1993), desirable responding occurs in the context of chronically unstable or uncertain self-esteem beliefs that demand constant attention and reaffirmation, particularly in the face of threat. Thus, it may be that desirable responding occurs in order to protect the self from experiencing failure, humiliation, or rejection. There is currently little research on the impact of this kind of psychological threat on desirable responding. However, Gold (2008) found that in order to protect oneself from imagined threat, people indulged in unwarranted optimism. The level of unwarranted optimism increased as threat increased. Unwarranted optimism in Gold's study is similar to desirable responding in that it involves a distorted, overly positive view of one's risk of developing a disease. Gold found that this overly positive distortion increased when the risk or "threat" increased. In another study, women who were exposed to a self-esteem threat in the form of false failure feedback subsequently engaged in higher levels of body image desirable responding when faced with thin media images compared with those not exposed to the threat (Jarry & Kossert, 2007). Beauregard and Dunning (1998) found that, following a self-esteem threat, people tailored their judgments of others in order to bolster their own self-worth and that the discrepancy between the judgment of self and of other increased in favour of the self. Together, these provide some evidence that desirable responding may increase in the face of threat to one's psychological security.

Accordingly, interventions that facilitate both the acknowledgement and the non-depressive acceptance of information threatening to self-image may also reduce desirable responding. Two promising strategies that appear to facilitate acknowledgement and non-



depressive acceptance of negative or threatening information are self-compassion and self-affirmation.

### **Self-Compassion**

Self-compassion is conceptualized by Neff (2003a) as “being open to and moved by one’s own suffering, experiencing feelings of caring and kindness toward oneself, taking an understanding, non-judgemental attitude toward one’s inadequacies and failures, and recognizing that one’s own experience is part of the common human experience” (p. 224). Self-compassion theory suggests that the psychological security needed in order to reduce defence against threatening information can be increased without needing to increase self-esteem or bolster the self-image (Leary, Tate, Adams, Allen, & Hancock, 2007). Neff, Kirkpatrick, and Rude (2007) suggest that self-compassion in the face of negative experiences serves to diminish the anxiety that usually occurs when self-criticism following negative experiences threatens to devalue the self.

Although it can be implemented to help individuals face a particular ego-threat, the effects of self-compassion seem to generalize and endure beyond a specific occasion of use (Neff, et al., 2007). In one series of studies, the induction of self-compassion was found to minimize the negative feelings that occurred when imagining an upsetting experience or when receiving negative feedback. It also served to increase participants’ ability to accept responsibility for their role in negative events without experiencing a concomitant increase in negative emotions (Leary et al., 2007). These results suggest that through the activation of self-compassion, individuals should be able to acknowledge less-desirable aspects of themselves and thereby not need to engage in desirable responding. That is, self-compassion may strengthen a sense of psychological security

such that the individual experiences less psychological threat and less need to defend against it.

### **Self-Affirmation**

“Self-affirmation is the active affirmation of some important aspect of one’s self-concept that is unrelated to a self-threat” (McQueen & Klein, 2006; p. 300). Self-affirmation has been shown to facilitate the acceptance of threatening information (Cohen, Aronson, & Steele, 2000). This facilitation is postulated to occur through a bolstering of self (Napper, Harris & Epton, 2009). Although a number of different self-affirmation techniques exist in the literature, they fall into two main approaches. One is positive feedback, for example receiving bogus feedback on an intelligence test (Fein & Spencer, 1997) or successfully completing an unrelated task (Trope & Pomerantz, 1998). The other involves bringing to mind personally held values (e.g. Cohen, et al., 2000; Galinsky, Stone, & Cooper, 2000).

There is substantial evidence that self-affirmation is effective in reducing defensiveness in the face of threat. When participants are forced to write an essay supporting a view contrary to their own but are then allowed to affirm a value that is important to them, they do not show the typical change in attitude to fit their behaviour (Steel & Liu, 1983). Affirmed individuals show greater willingness to consider the arguments of a position that is counter to their own (Cohen et al., 2000). Affirmed individuals accept threatening health messages more than non-affirmed individuals (Sherman, Nelson, & Steele, 2000). According to Schmeichel and Martens (2005), “thinking and writing about core values reduces defensiveness because it satisfies an

overarching and basic need for ‘self-integrity’, defined as considering oneself a moral and competent being (p. 660).” In other words, it provides psychological security.

Although these examples show that self-affirmation designed to bolster self-image “works”, they do not explain just how it works. It likely is not due to a boost in self-esteem as a meta-analysis of self-affirmation studies designed to bolster self-image showed no increase in state self-esteem (McQueen & Klein, 2006). Galinsky and colleagues (2000) suggest that self-affirmation works by reducing the psychological discomfort that would normally result from dissonance-producing actions or threatening information. Dissonance occurs when an individual is faced with holding two contradictory ideas. In order to reduce this dissonance, people generally “adjust” their beliefs or attitudes in order to reduce this dissonance (Steele & Liu, 1983). Galinsky and colleagues asked participants to prepare and then give a counter-attitudinal speech against a campus event at Princeton University. This particular event (an annual Nude Olympics that was discontinued in 1999) had almost universal and very strong support throughout the student body. Participants who were affirmed showed reliably lower levels of attitude change and of psychological discomfort than controls.

However, the positive effects of this intervention may not be particularly stable. Galinsky and colleagues (2000) showed that the psychological discomfort that was relieved by the self-affirmation intervention was reinstated when the original affirmation was then “disaffirmed”. Participants in the disaffirmed condition were informed that they had scored approximately one standard deviation below the midpoint of the distributions of the two values on which they had, in reality, personally scored the highest. The psychological discomfort scores of the disaffirmed participants were the same as non-

affirmed controls and they showed significantly more dissonance reducing attitude change than both affirmed and non-affirmed participants. This suggests that being affirmed and then having that affirmation removed was particularly distressing for participants. As well, Aronson, Blanton, and Cooper (1995) and Blanton, Cooper, Skurnik, and Aronson (1997) have shown that the affirmation cannot directly relate to the source of psychological discomfort or it will not have the desired effect of decreasing dissonance. This suggests that the self-affirmation intervention must be carefully chosen for it to be effective.

### **Current Study**

I propose that desirable responding commonly arises as a response to threat. Consequently, the psychological imperative to defend the self through self-enhancement may be lessened if feelings of threat can be reduced through appropriate interventions, such as self-compassion and/or self-affirmation. To test these propositions, I undertook an experimental study, designed to compare self-compassion and self-affirmation interventions with three different control conditions. The logic of the design is as follows.

1. To determine whether an experience of threat produces (a) psychological discomfort, and (b) desirable responding, I compared a no-threat control condition with a threat-only condition. Discomfort was measured with a 4-item psychological distress scale created for this study. Change in desirable responding was measured with the Self-Deceptive Enhancement (SDE) and Impression Management (IM) scales of the Balanced Inventory of Desirable Responding (BIDR; Paulhus & Levitt, 1987; Paulhus, 1991). The SDE scale measures the agentic dimension of desirable responding (called self-enhancement in this study)

and the IM scale measures the communal dimension of desirable responding (called exaggerated virtue in this study).

2. To determine whether a simple distractor task would reduce discomfort and desirable responding I compared the threat-only condition with a threat plus neutral writing condition which involved writing about the route the participant usually takes to campus.
3. To determine whether the two target interventions were more effective than a distractor task at reducing discomfort and desirable responding, I compared them to the neutral writing condition.
4. In order to gain some understanding of whether the ratio of positive to negative experiences persons recall about themselves may be driving any observed change in desirable responding, participants were asked to list personal experiences that were self-enhancing and self-diminishing. These comments would be used to create a desirable responding comment ratio (DR ratio).
  - a. To see if any change in desirable responding was being driven by the personal experiences recalled, I compared the comments in the no-threat control to those in the threat-only condition.
  - b. To see if the interventions resulted in fewer self-enhancing or more self-diminishing comments, I compared the comments of the intervention conditions with the minimal intervention control condition and the threat-only condition.

**Summary of design**

The entire study was conducted on-line. Participants completed the SDE and IM scales in Phase 1 along with a demographic questionnaire and measures of possible covariates including self-compassion and trait self-esteem. Approximately one week later, participants were randomly assigned to condition for Phase 2. All but the no-threat control were asked to recall and describe an experience of failure, humiliation, or rejection. Those in the intervention conditions then completed a neutral writing task, a self-compassionate description of the experience they had just recalled or were affirmed on a highly-ranked personal value, depending on condition. Psychological discomfort, self-compassion, and self-affirmation manipulation checks were then completed. This was followed by the SDE and IM scales except this time all participants were asked to list personal experiences that were congruent and that were incongruent with each statement of the desirable responding measures before re-rating themselves on that statement. This was followed by the completion of measures of self-compassion, state self-esteem, and psychological well-being. Those participants who had recalled a negative experience but had not had the chance to engage in therapeutic writing about it (either self-compassionate or self-affirming writing) were then given the self-compassion intervention to complete.

**Hypotheses**

1. It was expected that the psychological threat would result in an increase in (i) psychological discomfort and (ii) desirable responding in participants.
  - a. Neutral writing was not expected to alter these relationships.

- b. Engaging in the self-compassion exercise was expected to reduce the discomfort and desirable responding that had occurred in response to the threat.
  - c. Engaging in the self-affirmation exercise was expected to reduce discomfort. However, it was unclear what the effect of self-affirmation would be on desirable responding. The reduced discomfort was expected to result in a decrease in desirable responding. At the same time, self-affirmation may cause a “puffing up” of self and so result in an increase in desirable responding. Consequently, it was uncertain whether the self-affirmation intervention would result in an increase or a decrease in desirable responding.
2. It was expected that the observed changes in desirable responding would be mediated by the DR ratio. Specifically, threat recall was expected to cause an increase in the DR ratio due to increased numbers of self-enhancing comments in the threat control condition relative to the no-threat control condition.
- a. The neutral writing task was not expected to have any impact on the DR ratio.
  - b. Self-compassionate writing was expected to result in a fewer self-enhancing comments relative to the threat-only condition. It was also expected to result in more self-diminishing comments relative to the no-threat condition as self-compassion was predicted to allow participants to be more accepting of negative aspects of themselves.
  - c. Expectations in the self-affirmation condition were uncertain as it was difficult to predict whether the increased ability to tolerate negative information or the puffing up of self would have the stronger effect.

3. Consistent with the literature, I did not expect to see any increase in state self-esteem in the self-affirmation (McQueen & Klein, 2006) or self-compassion conditions (Leary, et al., 2007; Neff, 2003b) relative to the threat only condition.
4. The inclusion of the psychological well-being scale was exploratory so no predictions were made.

## **Method**

### **Participants**

Three hundred and nineteen University of Manitoba Introductory Psychology students were recruited through the Psychology Participant Pool for Phase 1 of the study. Pilot research suggested that an  $n$  of 30 participants per condition was sufficient to have 80% power to detect any effect. Approximately twice this number of participants was recruited in order to ensure sufficient  $n$  per condition after drop-outs and any exclusion criteria found to be necessary as well as to be able to conduct exploratory analysis based on trait difference stratification. University students were chosen because (a) much of the previous research on self-affirmation and self-compassion has used this population so using the same population allows for comparison, (b) the students were likely to have the reading and writing skills and the experiences needed to be able to participate in all aspects of the study and, (c) the extensive on-line experience and comfort that is typical of undergraduate students was well suited to the on-line nature of the study. Two hundred and thirty-seven participants were recruited in March, the remaining 67 in June/July, of 2010. Of these, 298 participated in Phase 2 (68% female, 32% male). The mean age of participants was 20.11 (range 17-36). All participants were given partial course credit in return for their participation. Owing to the enhanced reading level of many items and the



need for a capacity to detect and express linguistic nuances in the thought-listing task, the study was restricted to those who self-declared a proficiency in the English language.

**Measures** (contained in appendices)

**Desirable responding** (Appendix A). The Balanced Inventory of Desirable Responding (BIDR Version 6 – Form 40A; Paulhus & Levitt, 1987; Paulhus, 1991) is an extensively used scale designed to measure desirable responding. It is composed of two subscales: the self-deceptive enhancement scale (SDE), thought to reflect an agentic dimension (e.g. I never regret my decisions), and the impression management scale (IM), thought to reflect a communal dimension of desirable responding (e.g. I have never dropped litter on the street). Each subscale contains 20 items which are ranked on a Likert scale ranging from 1 (not true) to 7 (very true). Only extreme scores (6 and 7 or 1 and 2 for reverse scored items) are typically counted using a dichotomous scoring method where a 1 is assigned to extreme scores and a 0 to all other scores (Paulhus & Reid, 1991). The SDE scores and the IM scores have been shown to be reliable in past research with Cronbach's alphas of .68 and .74 respectively (Djikic, Peterson, & Zelazo, 2005). In this study, using the dichotomous scoring method, the SDE scores had a Cronbach's alpha of .70 and the IM scores an alpha of .80.

**Trait self-esteem** (Appendix B). Rosenberg's 10-item Self-Esteem Scale (RSE; Rosenberg, M., 1965) is a widely used measure of trait self-esteem. The scale measures global self-worth using items such as "I feel that I have a number of good qualities" that are rated on a 4-point scale (strongly agree, agree, disagree, strongly disagree). Neff and colleagues (2007) found the RSE scores to have a Cronbach's alpha of .87. For RSE scores in the present study, Cronbach's alpha = .86.

**Psychological discomfort manipulation check** (Appendix C). This 4-item measure was constructed from two separate sources. Three items were taken from an 11-item affect questionnaire devised by Elliot and Devine (1994) and used by Galinsky and colleagues (2000) to examine the effects of self-affirmation. The three items were used to measure psychological discomfort. Participants are asked to rate how much the words uncomfortable, uneasy, and bothered apply to them using a 7-point Likert scale ranging from 1 (does not apply at all) to 7 (applies very much). The fourth item was chosen to capture a general sense of well-being. It is a variation of the single-item Delighted-Terrible scale (D-T scale; Andrews & Withey, 1974) adjusted to measure in-the-moment feelings according to the approach of Harmon-Jones and colleagues (1997). The response options to this single question, *How do you feel about yourself at this very moment?*, range from 1 to 7 (1-delighted, 2-pleased, 3-mostly satisfied, 4-mixed (about equal satisfied and dissatisfied), 5-mostly dissatisfied, 6-unhappy, 7-terrible). These are the responses of the D-T scale. The D-T scale has been shown to be a valid and reliable single-measure of well-being (Sandvik, Diener, & Seidlitz, 1993) and almost as valid as several much longer measures of well-being.

The created 4-item psychological distress scale functioned well as a measure of psychological distress with all items showing moderate to high correlations with each other ( $r = .49 - .82, p \leq .001, n = 224$  for all inter-item correlations) and with good reliability (Cronbach's alpha = .88)

**Self-compassion manipulation check** (Appendix D). The self-compassion manipulation check was modeled on the self-affirmation check created by Napper and colleagues (2009). It was created with three items from the SCS (Neff, 2003a). The items

were chosen so that each one reflected one of the three aspects of the self-compassion scale: self-kindness, common humanity, and mindful acceptance.

**Self-affirmation manipulation check** (Appendix D). The self-affirmation check is that devised by Napper and colleagues (2009) and consists of five items designed to measure awareness of and concern with self.

**Self-compassion scale** (Appendix E). The Self-Compassion Scale (SCS; Neff, 2003a) is a 26-item scale designed to measure the three components of self-compassion identified by Neff. These include self-kindness (treating oneself with kindness and understanding rather than harshness and criticism), common humanity (seeing one's negative experiences as part of being human, not as a punishment or character flaw), and mindful acceptance (acknowledging and accepting painful thoughts and feelings without over-identifying with them). Responses are rated on a 5-point scale ranging from 1 (almost never) to 5 (almost always). Although made up of three components, these three are highly inter-correlated. Neff and colleagues (2007) found that the inter-correlation is explained by the higher-order single factor of self-compassion. Neff (2003a) reported a Cronbach's alpha of .92 for scores on the SCS scale, and good test-retest reliability ( $r = .93$ ) over a three-week period. For SCS scores in this study, Cronbach's alpha = .91.

**State self-esteem scale** (Appendix F). State Self-Esteem Scale (SSES; Heatherton & Polivy, 1991) is a 20-item scale comprised of three correlated factors: performance, social, and appearance self-esteem. Each item is rated on a 5-point scale (1 = *not at all*, 2 = *a little bit*, 3 = *somewhat*, 4 = *very much*, 5 = *extremely*). Heatherton & Polivy reported a Cronbach's alpha of .92 on the SSES. The Cronbach's alpha = .90 for SSES scores in this study.

**Psychological well-being** (Appendix G). The Warwick-Edinburgh Mental Well-being Scale (WEMWBS; Tennant et al., 2007) is a 14-item scaled developed by the National Health Service in Scotland to measure psychological well-being. Items are rated on a 5-point scale (1 = *not at all*, 2 = *occasionally*, 3 = *some of the time*, 4 = *often*, 5 = *all of the time*). Scores on the WEMWBS had a Cronbach's alpha of .89 with a student population, of .91 with a population sample and test-retest reliability was .83 at one-week (Tennant, et al., 2007). For this study, the wording of each item was adjusted to focus on *present, in the moment* well-being instead of more general feelings of well-being (permission obtained from measure authors). For the WEMWBS scores in the present study, Cronbach's alpha = .89.

**Validity check.** (Appendix H). These are three questions asking participants to rate themselves on a 5-point Likert scale (from *not at all* to *completely*) as to their level of honesty, attentiveness, and degree of distraction.<sup>3</sup>

**Procedure** (See Table 1 for summary of procedure)

**General.** The survey instruments of Phase 1 and Phase 2 were created and administered using the on-line survey creation tool SurveyGizmo (<http://www.surveygizmo.com>). Participants received their links to each phase directly from SurveyGizmo and were able to complete the study on the computer of their choosing. 48 hours was given in which to complete the measures of Phase 1. Approximately one week later, participants received their link to Phase 2. Participants again had approximately 48 hours in which to complete the Phase 2 measures.

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<sup>3</sup> Time-to-complete survey data is automatically provided by SurveyGizmo for all surveys. This information was also available as a validity check tool although it was not included in our validity check questions.

Table 1

*Summary of Procedure, Phase 1 and Phase 2*

Phase	Condition				
	No-threat	Threat-only	Neutral Writing	Self-Compassion	Self-Affirmation
1	SDE/IM	SDE/IM	SDE/IM	SDE/IM	SDE/IM
	SCS	SCS	SCS	SCS	SCS
	RSE	RSE	RSE	RSE	RSE
	Demographics	Demographics	Demographics	Demographics	Demographics
	Validity Check	Validity Check	Validity Check	Validity Check	Validity Check
2		Threat Recall	Threat Recall	Threat Recall	Threat Recall
		Threat Check	Threat Check	Threat Check	Threat Check
			Neutral Writing Task	Self-Compassion Intervention	Self-Affirmation Intervention
	Psychological Discomfort	Psychological Discomfort	Psychological Discomfort	Psychological Discomfort	Psychological Discomfort
	Manipulation Checks (2)	Manipulation Checks (2)	Manipulation Checks (2)	Manipulation Checks (2)	Manipulation Checks (2)
	SDE/IM training	SDE/IM training	SDE/IM training	SDE/IM training	SDE/IM training
	SDE/IM with comments	SDE/IM with comments	SDE/IM with comments	SDE/IM with comments	SDE/IM with comments
	SCS	SCS	SCS	SCS	SCS
	SSES	SSES	SSES	SSES	SSES
	WEMWBS	WEMWBS	WEMWBS	WEMWBS	WEMWBS
	Validity Check	Validity Check	Validity Check	Validity Check	Validity Check
		Self-Compassion Intervention	Self-Compassion Intervention		

*Note:* SDE = Self-Deceptive Enhancement Scale, IM = Impression Management Scale, SCS = Self-Compassion Scale, RSE = Rosenberg Self-Esteem Scale; SSES = State Self-Esteem Scale; WEMWBS = Warwick-Edinburgh Well-Being Scale.

Informed consent was obtained on-line as the first step for each phase. Debriefing occurred by email with a summary of the purpose of the study sent to all participants following the completion of Phase 2. As well, a summary of results was emailed to all those who expressed an interest.

**Phase 1.** All participants first answered a number of demographic questions. Participants then completed measures of self-enhancement (SDE and IM), of trait self-esteem (RSE) and of self-compassion (SCS). The SDE and IM were completed first so that the baseline measure of self-enhancement could be established without any influence from the reflection that may have occurred with the other measures. The remaining two measures, the RSE and SCS, were presented in random order to all participants. Finally, participants completed the validity questions.

**Phase 2.** Participants were randomly assigned to one of five groups: no-threat control, threat-only control, neutral writing control, self-compassion experimental, and self-affirmation experimental. This was done by using an on-line research randomizer (<http://www.randomizer.org/form.htm>) that proceeds in blocks with all conditions in a block being filled before moving on to the next block. This ensures equal n's (or near equal n's if the total N is not evenly divisible by the number of conditions) and that all conditions are being tested at the same time throughout the study.

**Threat task.** Participants in the threat-only, neutral writing, self-compassion and self-affirmation conditions were asked to recall a negative event that was experienced during the last five years that made them feel badly about themselves -- something that involved failure, humiliation, or rejection and that still caused them psychological discomfort. Next, they were asked to describe the event, including such details as what led up to the event, who was present, precisely what happened, how they felt at the time, and how they behaved. They had unlimited space in which to write about the event.

**Threat check.** Participants were asked to rate how badly they felt, *in this moment right now*, about the experience they had just recalled from 1 (*not at all badly*) to 5 (*very badly*).

**Neutral writing control condition.** Following the method of Pennebaker, Kiecolt-Glaser, and Glaser (1988), participants were asked to write about the route they usually take to get to university each day, describing any details along the way that are always or usually there.

**Self-compassion condition.** The self-compassion experimental group was then asked to apply the self-compassion promoting intervention to their negative experience (Leary, et al., 2007). This involved responding to the following prompts:

1. Please list ways in which other people also experience similar events (common humanity).
2. Please write a paragraph expressing understanding, kindness, and concern to yourself in the same way you might express concern to a friend who had undergone the experience you described (self-kindness).
3. Please describe your feelings about the event in an objective and unemotional fashion (mindfulness).

**Self-affirmation condition.** The self-affirmation group followed the method of Cohen, and colleagues (2000) with a slight variation. Whereas Cohen and colleagues had all participants rank 11 values from most important to least important, participants in this study choose their first, second, and third values from the list of 11. They then were asked to recall three or four experiences in which their number one ranked value was important. Lastly, they were asked to pick one of those experiences and to write about it

in more detail, including details such as what led up to the event, who was present, precisely what happened, how the individual felt at the time, and how he or she behaved.

*All five conditions.* Participants then completed manipulation checks including the 4-item psychological discomfort check, the 3-item self-compassion check (taken from the SCS; Neff, 2003a; appendix H), and the 5-item self-affirmation check (Napper, et al., 2009; appendix H).

Next, participants completed the SDE and IM scales with the added instructions to list up to five personal experiences that were congruent or incongruent with each statement before rating their agreement with the statement. Participants were instructed to recall personal experiences from their own life. Prior to doing so, there was a short training section to ensure the participants' understanding of congruent and incongruent comments (Appendix I). Participants were encouraged to try to recall experiences that provided evidence for (congruent) and evidence against (incongruent) the truth of the statement as it applied to the participant.

All participants then completed the same self-compassion scale from Phase 1. This was followed by the 20-item SSES (Heatherton & Polivy, 1991) and the psychological well-being scale (WEMWBS; Tennant et al., 2007).

There was concern that participants in the threat-only and neutral writing control conditions might be left with discomfort from the threat recall exercise. To address this, both these conditions were given the self-compassion intervention after they had completed all other Phase 2 measures. Leary and colleagues (2007) have shown that this intervention is successful in reducing the negative feelings associated with negative memory recall. As an additional precaution, all participants in the four threat-exposed



conditions were given contact information for counselling resources both at the informed consent stage and at the completion of Phase 2 (Appendix J).

The validity check questions completed Phase 2.

## Results

### Determination of sample for analysis

Of the 319 participants in Phase 1, 21 participants were not eligible for Phase 2 due to failure to complete one or more of the Phase 1 measures. The remaining 298 participants were randomly assigned to one of the five conditions: no-threat ( $n = 57$ ), threat-only ( $n = 62$ ), neutral writing ( $n = 59$ ), self-compassion ( $n = 59$ ), or threat plus self-affirmation ( $n = 61$ ). Seventy-three of these Phase 2 participants were removed for the reasons listed below. This left a final data set of 225 individuals. The number of deletions by condition and the final  $n$  per condition is summarized in Table 2.

Table 2

#### *Summary of Participant Deletion per Condition by Reason for Removal*

Reason for Removal	Condition				
	No-threat	Threat-only	Neutral Writing	SC	SA
No Negative Experience Recall	n/a	5	2	4	2
No participation in intervention task	n/a	n/a	0	1	7
Failure to complete $\geq 80\%$ of Phase 2 measures	3	4	5	0	1
Failure to comment on $\geq 80\%$ of either SDE or IM statements in Phase 2	5	4	6	9	8
Low honesty self-report (Not at all or not very)	3	1	0	3	0
Total $n$ deleted	11	14	13	17	18
Final $n$ per condition	46	48	46	42	43

*Note:* SDE = Self-Deceptive Enhancement Scale, IM = Impression Management Scale, SC = Self-Compassion, SA = Self-Affirmation

Participants were removed in sequential fashion, beginning with reason number 1, with the result that there was no overlap in the reasons for which a particular participant was removed from the study.

1. Participants who did not describe a negative experience were deleted as they were deemed not to have engaged in the threat process that was integral to this study ( $n = 13$ ). Although there is no way of knowing if they recalled an experience and simply did not wish to write it down, it was decided that objective evidence of recall, measured by having written at least a few words about an experience, was necessary for inclusion.
2. Participants in the self-compassion and self-affirmation conditions who did not do the relevant self-compassionate or self-affirming writing were excluded as doing this writing was integral to the study ( $n = 8$ ).
3. Mean substitution (the mean of the particular participant's other scores on that particular scale) was used to impute a value for any missing data points for a participant who had completed at least 80% of a particular scale. Those who did not meet this threshold were deleted as they were deemed to be missing too much data to infer the value of the missing data points from the data they had provided ( $n = 13$ ).
4. Participants were asked to rate their level of honesty in completing the surveys. Those who rated themselves as *not at all honest* or as *not very honest* were excluded ( $n = 7$ ).
5. Participants who did not make at least one comment on at least 80% of both the SDE and IM scales were excluded. Their data was deemed to be too different

from that of included participants to allow for meaningful analysis of the effect of the DR ratio on relationships of interest in this study ( $n = 32$ ).

It was originally planned to use the threat check as another exclusion criterion whereby participants who had recalled a negative experience about which they rated themselves as currently feeling *not at all badly* would be removed from analysis. This was because the recall of a *currently distressing* experience was fundamental to the hypotheses. However, I decided to eliminate this exclusion criterion from the sample determination process for the following two reasons:

1. Random assignment to condition means that the same type of people who rated themselves as currently feeling *not at all badly* about the negative experience they had just recalled would be in the control condition. As I had no way of knowing who these individuals were in the control condition, I was unable to remove them. Removing these individuals from the other conditions would have violated the assumption that the individuals in each of the five conditions were a random sample of the population of students that had registered for my study and would have called into question the validity of the statistical techniques I used to analyze the data.
2. There was no correlation between participants' ratings of how badly they currently felt about the experience and with how badly they felt at the time of the negative experience ( $r = .10, p = .186$ ). As well, an analysis of the experiences recalled by participants who reported currently feeling *not at all badly* about the experience and those who currently felt *very badly* showed no objective difference between the seriousness of the experiences recalled. This made it

difficult to know just what participants meant by the *not at all badly* rating they had given their experience. It could mean that they did not feel badly when they recalled the experience or that they no longer felt badly about the experience.

T-test comparisons between those included ( $n = 225$ ) and those excluded ( $n = 73$ ) from the final analyses showed no significant differences between the 2 groups on the Phase 1 scales (RSE, SCS, SDE, and IM). Using Chi-square analysis, there was no significant difference found in the number of deletions per condition ( $\chi^2 = 2.27, df(4), p = .686$ ) compared to what would be expected if all deletions occurred at the same frequency in all conditions.

A summary of demographic information is contained in Table 3. One difference of note between those included in and those excluded from the final analysis is the percentage of participants that spoke English. A much higher percentage of participants that were excluded from the study listed “Other” as their first language when compared with those who were included (34% in the excluded versus 17% in the included). Although it was stressed that proficiency in English was a prerequisite for participation in this study, this difference in English first language between the included and excluded participants suggest that the significant reading and writing challenge presented by this study was one reason for a number of the participants to fail to complete at least 80% of one or more Phase 2 measures.

### **Data Preparation**

Prior to analysis, all scales (Phase 1: SDE, IM, RSE, and SCS; Phase 2: SDE, IM, SSES, SCS, WEMWBS, and Discomfort Check) were examined using SPSS for accuracy of data entry, missing values, and for any violations of the assumptions of t-test and

multivariate analysis. As noted previously, mean substitution was used to impute values for missing data. In Phase 1 both the Self-Deceptive Enhancement Scale (SDE) and the Impression Management Scale (IM) were found to be significantly positively skewed. Square root transformation normalized the distribution of both scales. There was a single outlier score in each of the WEMWBS, SSE, SDE Phase 2, IM Phase 2, and the SSC Phase 2 scales ( $|z|$  scores  $> 3$ ). Following the procedure outlined by Cox (2006), when a

Table 3

*Demographics of Included and Excluded Participants*

Demographic Variable	Descriptor	Participants	
		Included	Excluded
<i>n</i>		225	73
Age (Mean)		20	20
Sex:	Female	69%	66%
	Male	31%	34%
Ethnicity:	Aboriginal/First Nation	1%	0%
	Arab/West Asia	1%	4%
	Black	4%	10%
	Chinese	8%	21%
	Filipino	8%	11%
	Japanese	.5%	0%
	Korean	1%	3%
	Latin American	2%	0%
	Metis	1%	3%
	Other	2%	6%
	South Asian	2%	1%
	South East Asian	2%	0%
	White/European	66%	43%
Language spoken at home:	English	81%	64%
	French	1%	0%
	Other	17%	34%
If English is not first language	Avg. number of years spoken?	12	10
	Avg. number of years read?	13	11

*Note:* Not all percentages add to 100% due to rounding

participant had a z-score  $> 3$  standard deviations above or below the mean, their corresponding total score was changed to be 0.5 higher or lower than the next highest or lowest scores, thus maintaining the individual's rank position on that scale and ensuring that no scores remaining in the data set for analysis were greater than 3 standard deviations away from the mean. One outlier low score was raised in each of the WEMWBS and the SSES scales. One outlier high score was lowered in each of the SDE Phase 2, IM Phase 2, and SSC Phase 2 scales.

### **Descriptive Statistics**

Mean and standard deviations for the Phase 1 measures (SDE, SDE square root transformed, IM, IM square root transformed, RSE, and SCS) and the Phase 2 measures (SDE, IM, SSES, SCS, WEMWBS, and Discomfort Check) by condition are found in Table 4. A visual inspection of the Phase 1 data shows no gross differences in mean or standard deviations between conditions on any scale suggesting a similar set of participants ended up in each condition following random assignments, as least as far as these scales are concerned.

Correlations between the Phase 1 measures are found in Table 5. The SDE and IM scales were significantly correlated with the RSE and the SCS scales. Because of these significant correlations, trait self-esteem and self-compassion at Time 1 will be considered as covariates in exploratory analyses, discussed later in this paper.

### **Manipulation Checks**

**Threat.** It was first established that participants did not vary by condition as to their rating of how badly the experience involving failure, humiliation, or rejection that they recalled made them feel. A one-way ANOVA found no difference between

Table 4

*Summary of Mean and Standard Deviation scores on the SDE, IM, RSE, SCS, SSES, WEMSBS, and Discomfort Check by Condition for Phase 1 and 2*

Measure	Condition									
	No-Threat		Threat-only		Neutral Writing		Self-Compassion		Self-Affirmation	
	M	SD	M	SD	M	SD	M	SD	M	SD
Phase 1										
SDE	3.92	2.59	4.48	3.62	4.35	3.46	4.68	3.25	4.83	3.05
SDE - Sq. Rt.	1.87	0.67	1.94	0.87	1.86	0.94	2.00	0.83	2.03	0.84
IM	4.13	2.91	4.89	4.05	4.80	3.50	5.41	3.89	5.96	3.74
IM -Sq. Rt.	1.87	0.79	1.96	1.04	2.02	0.87	2.17	0.85	2.31	0.81
RSE	29.35	4.47	29.51	5.03	30.18	4.84	30.81	4.54	29.93	4.43
SCS	75.39	14.44	76.53	15.75	78.71	15.50	79.35	14.38	75.82	14.30
Phase 2										
SDE	6.50	3.70	6.87	3.36	7.17	2.98	6.80	3.32	7.17	3.33
IM	6.69	3.31	6.21	3.25	6.82	3.61	5.85	3.04	8.19	2.94
SCS	77.02	16.37	75.82	18.93	79.20	16.82	79.03	14.13	74.70	17.37
SSES	69.38	11.58	68.63	12.90	71.81	11.99	71.38	14.28	70.94	11.61
WEMWBS	50.29	9.34	51.41	8.38	52.88	6.64	53.43	7.96	51.96	7.34
Discomfort Check	9.65	4.29	13.21	7.81	9.68	4.74	12.98	6.30	9.67	5.42

*Note:* P1 = Phase 1, P2 = Phase 2, SDE=Self-Deceptive Enhancement Scale, Sq. Rt. = Square root transformed, IM = Impression Management Scale, RSE = Rosenberg Self-Esteem Scale, SCS = Self-Compassion Scale, SSES = State Self-Esteem Scale, WEMWBS = Warwick-Edinburgh Mental Well-Being Scale

Table 5

*Correlations (Pearson's r) between Phase 1 scales*

	SDE (transformed)	IM (transformed)	RSE	SCS
SDE (transformed)	1	.407**	.514**	.289**
IM (transformed)	.407**	1	.229**	.228**
RSE	.514**	.229**	1	.571**
SCS	.298**	.228**	.571**	1

\*\* $p < .01$

condition on the mean level of participants' rating of "How badly *do you currently* feel about this experience",  $F(3, 175) = 0.76, p = .52$ . Participants' rating of "How badly *did* you feel about this experience" also were not significantly different,  $F(3, 175) = 0.79, p = .50$ . Means and standard deviations of participants' ratings on "How badly *do you currently* feel about this experience" and "How badly *did* you feel about this experience" are found in Table 6. Since the no-threat control condition did not recall a threat, they also did not complete the threat check and so were not included in these analyses.

To address the possibility that the psychological discomfort reported by participants represented their rating of how badly they currently feel about the experience and not the distress that the recall of the experience caused them, reported ratings of "How badly *do you currently* feel about this experience" and the psychological discomfort scale scores of participants in the threat-only condition were examined for correlation. The two scores were found to be moderately correlated ( $r = .47, p = .001$ ) suggesting that the psychological discomfort scale measured discomfort caused by the actual recall experience, not simply the distress associated with the experience itself.

Table 6

*Means and Standard Deviations of How Badly Participants Feel About Experiences*

*Recalled*

	Condition								
	Threat Only		Neutral Writing		Self-Compassion		Self-Affirmation		
	M	SD	M	SD	M	SD	M	SD	
Threat Check									
How badly <i>did</i> you feel?	4.33	1.14	4.24	1.20	4.45	1.02	4.56	0.73	
How badly <i>do you currently</i> feel?	2.88	1.38	2.50	1.23	2.74	1.23	2.65	1.07	



I next evaluated whether writing about this negative experience had the expected impact on psychological discomfort by comparing the no-threat control condition to the threat-only control condition. A comparison of the level of psychological discomfort of participants in the no-threat condition ( $M = 9.65$ ) with those in the threat-only condition ( $M = 13.21$ ) shows that the recall of a negative experience resulted in significantly higher reports of discomfort ( $t(80) = 3.04, p = .003, d = 0.6$ ).

Having established the potency of the negative experience recall on psychological discomfort, the effect of the various writing conditions on psychological discomfort can be considered. Before doing so, however, it is necessary to first evaluate whether the writing interventions operated as intended.

**Experimental interventions.** The intervention manipulation checks showed both interventions were successful at inducing the targeted psychological states. Self-compassion primed participants reported experiencing higher levels of self-compassion as measured by the self-compassion manipulation check ( $M = 11.20$ ) than those in the neutral writing and self-affirmation conditions who were not primed to be self-compassionate ( $M = 10.01; t(128) = 3.01, p \leq .003, d = 0.57$ ). Self-affirmed individuals scored significantly higher on the self-affirmation manipulation check ( $M = 19.20$ ) than those in the neutral writing and self-compassion conditions who had not engaged in the self-affirmation exercise ( $M = 17.17; t(129) = 2.94, p \leq .004, d = 0.57$ ).

Having established that the writing interventions operated as intended, each writing condition, including neutral writing, may now be compared with the threat-only condition to determine the impact of each form of writing in alleviating the psychological discomfort produced by the threat manipulation.

**Effects of writing on psychological discomfort.** From an analysis of the data it appears that merely engaging in a bit of emotionally neutral writing following the disclosure of a negative experience is enough to significantly reduce psychological discomfort. Those participants who engaged in a neutral writing task following the negative experience recall showed levels of psychological discomfort ( $M = 9.68$ ) that were significantly lower ( $t(84) = 2.92, p = .004, d = 0.6$ ) than those who engaged only in the recall exercise ( $M = 13.21$ ). Because of this difference, the threat-only and neutral writing conditions were not collapsed as planned. Accordingly, the two therapeutic writing interventions will be compared to both the neutral writing and threat-only conditions.

Participants who engaged in the self-compassion intervention reported levels of discomfort ( $M = 13$ ) that were significantly higher ( $t(76) = 2.8, p = .007, d = 0.59$ ) than those who engaged in the neutral writing task ( $M = 9.68$ ). Thus, writing self-compassionately about the negative experience did not provide the same immediate degree of relief of distress as did writing about a different, emotionally neutral topic. Compared to participants in the threat-only condition ( $M = 13.21$ ) those in the self-compassion condition ( $M = 13$ ) showed no significant difference in distress ( $t(88) = .17, p = .868, d = 0.03$ ). This indicates that although writing about the negative experience in the self-compassion condition did not alleviate the distress, it also did not further elevate distress relative to simply disclosing the experience in the first place.

The self-affirmation intervention had an effect on discomfort levels that mirrored that of neutral writing. First, compared to the distress experienced by those in the threat-only condition ( $M = 13.21$ ), the distress experienced by those in the self-affirmation

writing condition ( $M = 9.67$ ) was significantly lower ( $t(87.85) = 2.8, p = .007, d = 0.58$ ). However, this lower distress level of the self-affirmed participants ( $M = 9.67$ ) was virtually identical ( $t(87) = .01, p = .995, d = 0.00$ ) to the discomfort levels of the participants who engaged in neutral writing ( $M = 9.68$ ). That is, the distress associated with disclosing the negative experience was immediately alleviated to an equal degree by these two forms of writing, both of which focus on material other than the negative experience. Self-affirmation did not add anything to the effect of distraction.

Finally, how do the two therapeutic writing interventions compare as far as providing relief for discomfort goes? Discomfort levels were compared between those who had engaged in the self-compassion intervention and those who had engaged in the self-affirmation condition. There was a significant difference ( $t(81) = 2.59, p = .011, d = 0.56$ ) with self-compassion primed individuals ( $M = 13$ ) reporting higher levels of psychological discomfort than self-affirmed individuals ( $M = 9.67$ ). This indicates that writing about a negative experience, even in a self-compassionate vein, does not relieve the psychological discomfort associated with disclosing a shameful episode the way that writing about another subject, in this case involving self-affirmation, does. See Figure 1.

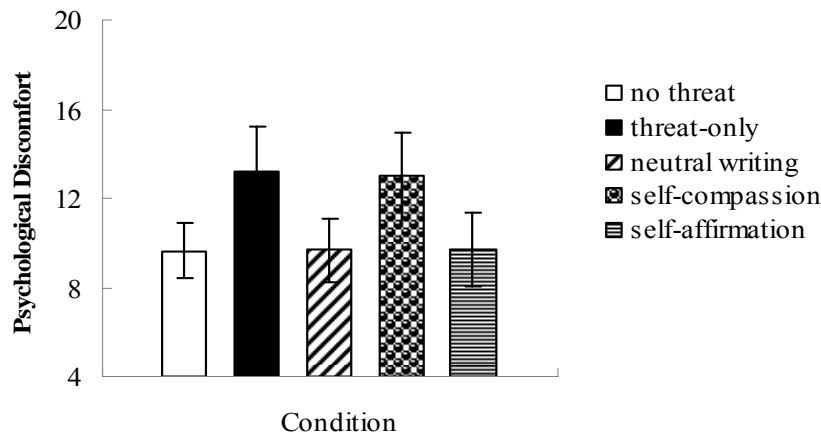
### **Desirable Responding**

**Change in SDE and IM.** In order to examine the impact of the interventions on desirable responding, residual scores for both the SDE and IM scales were first created.<sup>4</sup> Simple change scores could not be used because Phase 1 SDE and IM scores had been transformed and were no longer in the same units as Phase 2 SDE and IM scores.

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<sup>4</sup> Residuals were calculated using regression with SDE (IM) Phase 1 scores (square root transformed) as the IV and SE (IM) Phase 2 scores as the DV.

Residual scores below zero indicate that desirable responding decreased, whereas scores above zero indicate that desirable responding increased. Residual scores were compared using independent samples t-tests.



*Figure 1.* Mean psychological distress following negative experience recall, by condition. Minimum score possible is 4, maximum is 28. Vertical bars represent 95% confidence intervals.

I first examined whether the recall of a negative experience resulted in an increase in desirable responding by comparing those who had not recalled such an experience with those who had but who had not engaged in any other writing. Contrary to expectations, it appears that the increase in psychological discomfort that arose with the negative experience recall did not lead to an increase in desirable responding. Changes in self-enhancement showed no significant differences ( $t(92) = -0.38, p = .704$ ) when the SDE residuals of those who had not recalled a negative experience ( $M = -.13$ ) were compared with those who had ( $M = .11$ ). There was also no significant difference in the change in exaggerated virtue ( $t(92) = 1.12, p = .267$ ) when the IM residual scores of those who had not recalled a negative experience ( $M = .38$ ) were compared with those who had ( $M = -.26$ ).

I then considered whether neutral writing would have a different impact on changes in desirable responding when compared with those who had recalled a negative experience but had not engaged in any writing. No differences were expected and none were found. The mean SDE residuals of those who had recalled a negative experience ( $M = .11$ ) were not significantly different ( $t(92) = -0.79, p = .430$ ) than the mean SDE residuals of those who had engaged in neutral writing ( $M = .54$ ). Changes in exaggerated virtue also showed no significant difference ( $t(92) = -0.88, p = .383$ ) when the mean IM residuals of those who not engaged in any writing ( $M = -.26$ ) were compared with that of those who had engaged in neutral writing ( $M = .25$ ). This suggests that neutral writing was successful in removing the psychological distress associated with the negative memory recall without any “cost” of an increase in desirable responding.

When the therapeutic writing conditions were considered, several significant differences were found. However, it must be kept in mind that I found no difference in the change in desirable responding, neither self-enhancement nor exaggerated virtue, between those who did not engage in negative memory recall and those who did. Because of this, I am no longer evaluating the therapeutic writing conditions to see if either impacts the level of desirable responding that occurs *as a result of negative memory recall*. Instead, any significant difference that is found will help to explain the mechanism by which these interventions, in general, have their effect.

Engaging in self-compassionate writing did not appear to have a significant impact on the self-enhancement aspect of desirable responding. Participants who were primed with self-compassion following the negative experience recall did not show statistically different SDE residuals ( $M = -.10; t(86) = 1.10; p = .277$ ) when compared

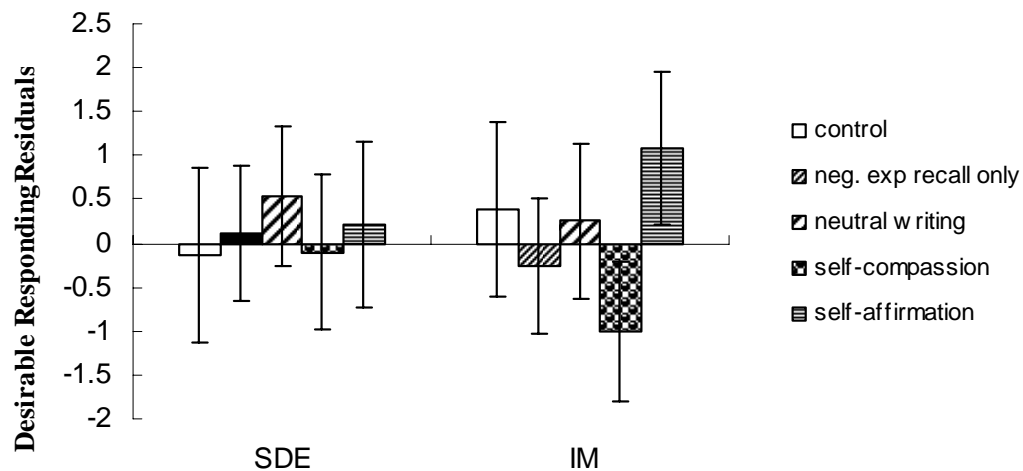
with those who had engaged in neutral writing ( $M = .54$ ). So, although the self-compassion primed individuals were left with significantly higher distress levels than those who engaged in neutral writing following negative experience recall, this did not result in increased self-enhancement relative to those whose distress had been alleviated by the neutral writing. This parallels the findings comparing the no-threat and threat-only control conditions which showed no increase in self-enhancement following negative experience recall. When the IM scale was considered, self-compassion primed individuals showed a reduction in exaggerated virtue ( $M = -1.01$ ). This reduction was significantly different ( $t(86) = -2.13, p \leq .036, d = -0.45$ ) from the slight increase in exaggerated virtue found in those who had done some neutral writing ( $M = 0.25$ ). What these results tell us is that engaging in the self-compassion exercise results in lower levels of exaggerated virtue for individuals and that this holds true in the face of psychological distress.

The changes in desirable responding of participants who had engaged in neutral writing were then compared with those participants who had engaged in the self-affirmation exercise. No significant differences in desirable responding were found between these two groups of participants. On the SDE scale, self-affirmed individuals had a mean increase in self-enhancement ( $M = .22$ ) that was not significantly different ( $t(87) = 0.53; p = .595, d = 0.1$ ) from those who had engaged in neutral writing ( $M = .54$ ). Although the increase in exaggerated virtue for self-affirmed individuals ( $M = 1.08$ ) was higher than that of those who had engaged in neutral writing ( $M = .25$ ), the difference was not significant ( $t(87) = 1.35; p = .181, d = 0.29$ ).

Finally, the participants who had engaged in the two therapeutic writing tasks were compared. For both types of desirable responding, self-enhancement and exaggerated virtue, individuals who were self-affirmed showed increases and those who engaged in self-compassion showed decreases, relative to baseline. However, the relative difference was only significant for exaggerated virtue. Self-compassion primed individuals had a decrease in self-enhancement ( $M = -.10$ ) that was not significantly different ( $t(83) = -4.96; p = .621; d = -0.11$ ) from the increase in self-enhancement for those individuals who had engaged in self-affirmation ( $M = .22$ ). However, when exaggerated virtue was considered, the mean IM residual scores of self-compassion primed individuals ( $M = -1.01$ ) was significantly lower ( $t(83) = -3.57, p \leq .001, d = -0.77$ ) than that of self-affirmed individuals ( $M = 1.08$ ). Individuals who had engaged in self-compassion decreased their exaggerated virtue scores from baseline ( $t(41) = -2.56, p = .014$ ) while those who had been self-affirmed increased their exaggerated virtue scores from base line ( $t(42) = 2.51, p = .016$ ). That is, engaging in the self-compassion writing exercise resulted in participants reporting significantly less exaggerated virtue whereas self-affirmed individuals reported significantly more. See Figure 2.

**Comment Coding.** In Phase 2, participants were asked to list up to five personal experiences that were congruent or incongruent with each statement on the BIDR SDE and the BIDR IM scales before rating their agreement with the statement. For analysis, each comment was first coded as to whether it was congruent with the statement, incongruent with the statement or if it was undetermined. This coding was done by 2<sup>nd</sup> and 3<sup>rd</sup> year psychology students who volunteered for the research experience. Due to the size of the comment data set (approximately 27,000 comments in total), it was divided

into two parts. Part A contained the SDE and IM comments on those statements where a higher rating on the Likert scale means greater desirable responding. Part B contained the SDE and IM comments on those statements where a lower rating on the Likert scale means greater desirable responding (i.e. the reverse coded items of both scales). There were 10 volunteer coders, with 5 assigned to each part, A and B. Training of the coders consisted of taking samples of comments from the data set and demonstrating which would be considered congruent, incongruent, or unable to determine. Coders were then given a set of comments to code on their own. This was followed by a comparison of coding and discussion with groups members and the trainer until both groups of coders were consistent within their group on how they would code various statements as well as consistent with the coding of the trainer.



*Figure 2.* Comparison by condition of effect on residual levels of desirable responding controlling for levels of desirable responding at Time 1, for both SDE and IM. Vertical bars represent 95% confidence intervals. SDE = Self-Deceptive Enhancement Scale; IM = Impression Management Scale.



Due to competing time demands, only two of five coders were able to complete the coding for Part A and three of five coders for Part B. Inter-rater reliability<sup>5</sup> was calculated for the three possible pairings of coders for Part B with the pairing having the highest inter-rater reliability chosen as the basis for further analysis. The initial inter-rater reliability for the two Part A coders was .72. For the two selected Part B coders, it was .70. Coding disagreements were highlighted. Each pair of coders was then asked to discuss the comments on which they had disagreed and, if possible, to come to an agreement on coding. Both pairs of coders were able to agree, following discussion, on the coding for all comments in their part.

The comments were then recoded as self-enhancing or self-diminishing. The congruent comments in Part A and the incongruent comments in Part B (the reverse coded items) were now coded as self-enhancing. The incongruent comments in Part A and the congruent comments in Part B were coded as self-diminishing. “Unable to determine” comments of both Part A and B became undetermined comments. The final comment data set for the SDE scale included 4688 enhancing, 4845 diminishing, and 3338 undetermined. The IM comment data set included 4223 enhancing, 6142 diminishing, and 2447 undetermined. The number of participants included in this comment data set is somewhat reduced from the initial numbers as those participants who commented on fewer than 80% of either the SDE or IM statements were removed from analysis as noted earlier in this section.

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<sup>5</sup> Inter-rater reliability represents the ratio of comments on which there was agreement to the total number of comments.

**Desirable Responding Comment Ratio.** The desirable responding comment ratio (DR ratio) was calculated by dividing the number of self-enhancing comments by the total number of self-enhancing and self-diminishing comments. See Table 7 for a breakdown of the average number of self-enhancing and self-diminishing comments per participant by condition as well as the mean and standard deviation of the comment ratios. Statistics for undetermined coding are not included as these comments did not form part of the desirable responding comment ratio. Planned t-test comparisons showed no significant differences between the mean DR ratio of any two conditions on either the SDE or the IM scales.

Table 7

*Average Number of Self-enhancing and Self-diminishing Comments and Comment Ratio for SDE and IM Scales by Condition*

Condition	SDE				IM			
	Enhancing		Diminishing		Enhancing		Diminishing	
	<i>M</i>	<i>M</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>M</i>	<i>M</i>	<i>SD</i>
No threat	21	22	0.49	0.16	18	28	0.37	0.17
Threat-only	18	21	0.46	0.18	17	26	0.38	0.20
Neutral Writing	23	20	0.52	0.15	19	29	0.40	0.19
Self-Compassion	22	23	0.49	0.16	19	28	0.39	0.17
Self-Affirmation	21	22	0.49	0.14	21	25	0.46	0.19

*Note.* SDE = Self-Deceptive Enhancement Scale, IM=Impression Management Scale, DR Ratio = Desirable Responding comment ratio.

**Mediation Analysis.** Since there was a significant difference in the change in IM between individuals who had been primed with self-compassion and those who were self-affirmed and since there is an observed but not significant difference in the DR ratio with that of the self-affirmed participants higher than those of the self-compassion condition, a

mediation analysis was done for exploratory purposes. Using Sobel's test of mediation, the mediating effect of the DR ratio on the relationship between condition and change in IM was not found to reach significance ( $p = .11$ ).

**Correlations between DR ratio and Change in Desirable Responding.** The correlations between the DR ratio and the change in desirable responding for both the SDE and IM scales were also examined. As expected, the DR ratio was positively correlated with changes in desirable responding on both the SDE and IM scales. The strength of this correlation varied by condition and by scale with the IM scale showing wider variability in correlation strength than the SDE scale (Table 8).

Table 8

*Correlations between the Desirable Responding Comment Ratio and Changes in Desirable Responding*

Condition	SDE residual	IM Residual
No-Threat	.62**	.59**
Threat-only	.41**	.39**
Neutral Writing	.46**	.71**
Self-Compassion	.58**	.43**
Self-Affirmation	.62**	.34*

*Note:* SDE (IM) residual = change in Self-Deceptive Enhancement (Impression Management) at Time 2 after controlling for level of Self-Deceptive Enhancement (Impression Management) at Time 1.

\*  $p < .05$  \*\*  $p < .01$ .

### State Self-Esteem

Consistent with the literature, it does not appear that the self-affirmation intervention results in an increase in state self-esteem. A t-test comparison of average

state self-esteem at Time 2 between individuals who had been self-affirmed ( $M = 70.94$ ) and those in the neutral writing condition ( $M = 71.81$ ) showed no significant difference ( $t(87) = 0.35, p = .730$ ). To explore where trait self-esteem at Time 1 may be masking the difference, an ANCOVA analysis was run, controlling for trait self-esteem, comparing self-affirmed individuals with no-threat control individuals. No significance of condition was found,  $F(1,86) = 0.06, p = .813$ , when trait self-esteem was held constant.

### **Exploratory Analyses**

**Psychological Well-Being.** It does not appear that the negative experience recall or the therapeutic writing interventions had any impact on psychological well-being. A *t*-test comparison of average total scores on the Warwick-Edinburgh Mental Well-Being Scale (WEMWBS) between individuals who had engaged in therapeutic writing (self-compassion or self-affirmation) ( $M = 52.69$ ) and all others ( $M = 51.53$ ) showed no significant difference ( $t(223) = 1.05, p = .294$ ). When the two therapeutic writing conditions were compared, mean WEMWBS scores of self-compassion primed individuals ( $M = 53.42$ ) were not significantly different ( $t(83) = 0.88, p = .383$ ) than the mean WEMWBS scores of self-affirmed individuals ( $M = 51.96$ ).

There was some evidence the self-affirmation, although resulting in lower reported levels of psychological distress, came at some cost to overall psychological well-being. There was a significant negative correlation between the change in exaggerated virtue for self-affirmed individuals and their subsequent psychological well-being ( $r = -.31, p = .04$ ). This association was not found in any of the other conditions.

**Trait Self-Esteem.** Because of the significant correlation of trait self-esteem scores with self-enhancement and exaggerated virtue scores at Time 1, the possibility that

self-esteem might be useful as a covariate when examining the change in desirable responding was considered. Analysis showed that trait self-esteem had a non-significant main effect on the change in self-enhancement,  $F(1,219) = 3.35, p = .069$ , and on the change in exaggerated virtue,  $F(1,219) = 0.25, p = .617$ . Because there was no significant effect of trait self-esteem on these change scores, there was no need to control for the level of trait self-esteem in the analyses concerning change in desirable responding.

**Self-Compassion.** There was also a significant correlation of Time 1 self-compassion scores with self-enhancement and exaggerated virtue scores at Time 1. This raised the possibility that base-line levels of self-compassion might be useful as a covariate when examining the change in desirable responding. Analysis showed that Time 1 trait self-compassion had a non-significant main effect on the change in self-enhancement,  $F(1,219) = 3.58, p = .060$ , and on the change in exaggerated virtue,  $F(1,219) = 0.14, p = .714$ . Because of these non-significant results, there was no need to control for Time 1 levels of self-compassion in the analyses examining change in desirable responding.

## Discussion

The structure of this study was based on the hypothesis that (a) psychological threat would result in psychological discomfort and (b) individuals would be motivated to self-enhance in order to alleviate that discomfort. Underlying this structure is a conceptualization of desirable responding that explains desirable responding as an attempt to maintain a positive self-image when that self-image is under threat (Morf & Rhodewalt, 1993). Results from this study support the first part of the hypothesis but not

the second. The recall of a negative experience did result in psychological distress. However, this distress did not lead to an increase in desirable responding.

There are a number of possible explanations for why the distress did not lead to desirable responding. It may be that the psychological threat was not “distressing” enough. Alicke and Sedikides (2009) have found that in order for a threat to self-image to result in desirable responding, the decrease in self-image must be sufficiently large so as to reduce it below a level that is tolerable to the individual. Although the threat in this study did result in a significant increase in psychological distress, the heightened distress level was still at a moderate level of 14 out of a possible score of 28. As well, individuals were recalling experiences which had happened in the past. Some degree of processing of the impact of these experiences would have already occurred. This suggests that the distress in this study may not have resulted in a sufficiently strong threat to self-image to motivate desirable responding.

It may also be that the private nature of the threat precluded desirable responding. Alicke and Sedikides (2009) suggest that for a threat to result in self-enhancement, not only does it need to be significant, it may need to have a public component as well. Leary, Terry, Allen, and Tate (2009) note that much of the self-enhancement literature involves ego threat that includes public self-image threat along with the private self-image threat. Hepper and colleagues (2010) suggest that for many individuals, self-enhancement occurs when there is an opportunity to receive positive feedback regarding how they have presented themselves. The threat to self-image in this study was a private one except in the very limited degree that the researcher may read the negative

experience reported by the participant. Any perception of public threat for participants was likely very small.

Although the assumption that threat recall would result in psychological distress was supported in this study, it did not occur as predicted in the writing conditions. Contrary to expectations, self-compassionate writing did not reduce the distress and neutral writing did. Self-affirming writing had the expected effect of reducing distress. The simplest way to explain these results is to say that the self-compassionate writing focused participants' attention on the negative event they had recalled and that the neutral writing and self-affirming writing distracted people from the negative event. It is this "focus versus distraction" difference between conditions that may explain the observed effects on distress. The fact that self-affirmation did not add anything to the effect of neutral writing on distress gives support to the explanation that lower levels of reported distress among self-affirmed individuals was due to distraction. This is the same pattern of results reported by Ehring, Fuchs, and Klasener (2009) who found that distraction served to reduce negative affect following the recall of a negative event whereas focus on the event served to maintain it. The fact that individuals who engaged in neutral writing reported similar levels of distress as those participants who had not been exposed to psychological threat also lends support to the contention that the threat in this study was fragile. In research where the threat was significant, neutral writing was not sufficient to remove the psychological distress that occurred in response to the recall of negative events (Smyth, et al., 2002).

As expected, the DR ratio (the ratio of self-enhancing comments to self-enhancing plus self-diminishing comments) was highly correlated with changes in desirable

responding, both self-enhancement and exaggerated virtue, across conditions. However, contrary to expectations, this ratio was not impacted by condition in the predicted fashion. As well, although there was a significant difference in the change in exaggerated virtue scores of participants who had been self-affirmed and those who had been primed with self-compassion, the DR ratio was not found to be significantly mediating the relationship between these two conditions and the change in exaggerated virtue. There are a number of possibilities as to why the DR ratio would be highly correlated with changes in desirable responding and yet not be found to be a significant driver of that change. One possibility is that the high number of comments that were undetermined is masking the effect of commenting. Another possibility is that the coders made judgments as to whether a comment was self-enhancing or self-diminishing that was at odds with what the participant meant the comment to be, thereby muddying the effect of the commenting on participants. Although the coders agreed with each other, there was no mechanism by which they could check to see if they had interpreted the intent of the participant correctly. As well, it could be that the act of commenting, an exercise in recalling experiences, confounded the impact of the writing conditions and the negative experience recall. There may simply have been too many competing influences of recalled experiences to have a clear effect of the experiences recalled in the commenting. Or, there may be a mechanism not addressed in this study by which both the comments and the change in desirable responding are impacted. Future research which a) reduces or eliminates undetermined comments as well as b) separates the impact of the writing interventions on the experiences recalled in the commenting and the effect of those



experiences recalled on subsequent desirable responding is needed to provide clearer evidence for or against the hypothesized role of the DR ratio in this study.

Lastly, there was a significant difference in the effect of the therapeutic writing conditions, self-compassion and self-affirmation, on exaggerated virtue. Individuals engaging in the self-compassion exercise reported a significant decrease in exaggerated virtue. Conversely, those who engaged in the self-affirmation exercise reported a significant increase in exaggerated virtue. The decrease in exaggerated virtue following the self-compassionate writing adds to the growing body of literature showing that self-compassion allows for less perfectionism in the way that one views oneself (Neff & Vonk, 2009). The increase in exaggerated virtue which occurred in self-affirmed individuals is a little more puzzling. Providing a possible explanation is a horizontal and vertical spread theory of self-enhancement put forward by Alicke and Sedikides (2009). They postulate that desirable responding is a mechanism designed to protect an individual's "interests". That is, the self-images and self-views that are of primary importance to the individual. They also suggest that an event that serves one interest will also benefit other related interests. This mutually benefiting or "enhancing" process may explain why recalling experiences in which one exhibited a highly valued trait resulted in an increase in exaggerated virtue. Assuming that self-affirming by writing about these experiences would make one feel like a good person (i.e. one is "living up to" one's values), and given that the items on the IM scale also measure how much one thinks he or she is a good person on a variety of communal qualities, it may be that the self-affirmation exercise "horizontally" enhanced individuals' self-perceptions on the IM items. A review of the values chosen by participants on which to write lends some

support to this hypothesis. Approximately 55% chose a communal value (relationships or sociability), 20% an agentic value (physical attractiveness, athleticism or business acumen), and the remainder a value not clearly communal or agentic (e.g. sense of humour, spontaneity or romanticism).

This leaves the question of why a decrease and increase in exaggerated virtue in the self-compassion and self-affirmation conditions respectively but not in self-enhancement. That is, why is the effect only on the exaggerated virtue component of desirable responding? It may simply be that the communal nature of the self-compassion intervention and the communal nature of the values about which the majority of self-affirmed participants chose to write activated the communal interests of individuals and not their agentic interests. This focus on communal interests resulted in an impact on the communal dimension of desirable responding, exaggerated virtue, and not on the agentic dimension, self-enhancement.

### **Limitations and Future Directions**

There are a number of limitations in this study which prevent drawing firm conclusions from the data. First, although the threat operated somewhat as planned, resulting in increased psychological distress, the resulting level of distress was still in the moderate range. This may have limited the potential effects of the distress, both in terms of needing to defend against the threat as well as being a level of distress that dissipated easily. There was no difference in psychological well-being between any conditions by the end of the study suggesting the threat was not particularly durable. A future study could choose a threat that had been found to increase psychological distress to a larger extent and one found to be more durable. For instance, the level of distress might be

increased by having the threat to self-image occur as part of the experimental manipulation, not as a recall of a previous event with time to have been well-processed. The durability of the threat might be increased by telling participants that, as part of the experiment, what they write will be scored in a way that will rank them as to how wise they are, how generally talented, or some other such dimension. This bogus ranking, designed just to heighten the possibility of threat to self-image, would not actually have to be provided.

Second, the high percentage of undetermined comments (approximately 23%) precludes drawing any conclusions as to whether the number of self-enhancing and self-diminishing comments mediates the relationship between condition and change in desirable responding. This could be addressed in future study by having participants designate their comments as congruent or incongruent which would allow the researcher to know the participants' perception of each of their comments. This would allow for a more accurate assessment of whether the memories recalled by participants influences desirable responding.

Third, the design of this study was demanding of participants and took many participants much longer to complete than the advertised length of study. Several participants included in their comments a statement to the effect that they found the comment listing task very onerous. This suggests they may have limited their commenting and also means they may have become less attentive to the task. A future study could lessen the demand on participants by having one group of participants comment on just the SDE scale and another on just the IM scale.

The actual act of commenting on the statements may have confounded the impact of the interventions as participants were asked to recall both experiences that were consistent with their self-views and experiences that were inconsistent. This recall of experiences is not entirely dissimilar to the self-compassion and self-affirmation writing exercises. A future study could first ascertain the effect of self-affirmation and self-confirmation on the relationship between threat and desirable responding. Once this was established, commenting could be added in a subsequent study to see how it impacted the previously observed relationships.

### **Conclusion**

To my knowledge, this is the first time that these two strategies, self-compassionate and self-affirming writing, have been compared directly. Both strategies have been demonstrated to help individuals to accept negative or threatening information. In order to know which intervention would be best in a given situation, it is important to understand how they are similar and how they differ in their effects. This study provides some evidence of how their effects differ. Individuals who were affirmed on a personal top-ranked value reported significant increases in exaggerated virtue. Individuals who wrote with self-compassion about a personal negative experience reported significant decreases in exaggerated virtue. As well, exploratory analysis of the data showed that for self-affirmed individuals, an increase in exaggerated virtue was correlated with a decrease in psychological well-being. This correlation was not seen for individuals who engaged in self-compassionate writing. If these correlations prove to be reliable in future research, it would suggest a cost to the use of self-affirmation that is not found with prompting a self-compassionate attitude.

This study did not show an increase in desirable responding following a threat to self-image. As such, it was unable to address the questions of whether engaging in either of the interventions would result in (a) a decrease in desirable responding following a threat to self-image and (b) impact the ratio of self-enhancing to self-diminishing experiences recalled by individuals. In order to address these questions, future research must first experimentally induce increased desirable responding. This could then be followed by a comparison of self-compassion and self-affirmation as methods to reduce this desirable responding. Given the inter-personal and societal costs that sometimes occur as a result of desirable responding, finding a way to reduce desirable responding when it has proven to be detrimental could be beneficial to the individual and to society.

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## Appendix A

## Balanced Inventory of Desirable Responding (BIDR Version 6 – Form 40A;

Paulhus &amp; Levitt, 1987; Paulhus, 1991)

Using the scale below as a guide, write a number beside each statement to indicate how much you agree with it.

1-----2-----3-----4-----5-----6-----7  
 NOT TRUE                      SOMEWHAT TRUE                      VERY TRUE

- \_\_\_\_\_ 1. My first impressions of people usually turn out to be right.
- \_\_\_\_\_ 2. It would be hard for me to break any of my bad habits. (R)
- \_\_\_\_\_ 3. I don't care to know what other people really think of me.
- \_\_\_\_\_ 4. I have not always been honest with myself. (R)
- \_\_\_\_\_ 5. I always know why I like things.
- \_\_\_\_\_ 6. When my emotions are aroused, it biases my thinking. (R)
- \_\_\_\_\_ 7. Once I've made up my mind, other people can seldom change my opinion.
- \_\_\_\_\_ 8. I am not a safe driver when I exceed the speed limit. (R)
- \_\_\_\_\_ 9. I am fully in control of my own fate.
- \_\_\_\_\_ 10. It's hard for me to shut off a disturbing thought. (R)
- \_\_\_\_\_ 11. I never regret my decisions.
- \_\_\_\_\_ 12. I sometimes lose out on things because I can't make up my mind soon enough. (R)
- \_\_\_\_\_ 13. The reason I vote is because my vote can make a difference.
- \_\_\_\_\_ 14. My parents were not always fair when they punished me. (R)
- \_\_\_\_\_ 15. I am a completely rational person.
- \_\_\_\_\_ 16. I rarely appreciate criticism. (R)
- \_\_\_\_\_ 17. I am very confident of my judgments.
- \_\_\_\_\_ 18. I have sometimes doubted my ability as a lover. (R)



- \_\_\_\_\_ 19. It's all right with me if some people happen to dislike me.
- \_\_\_\_\_ 20. I don't always know the reasons why I do the things I do. (R)
- \_\_\_\_\_ 21. I sometimes tell lies if I have to. (R)
- \_\_\_\_\_ 22. I never cover up my mistakes.
- \_\_\_\_\_ 23. There have been occasions when I have taken advantage of someone. (R)
- \_\_\_\_\_ 24. I never swear.
- \_\_\_\_\_ 25. I sometimes try to get even rather than forgive and forget. (R)
- \_\_\_\_\_ 26. I always obey laws, even if I'm unlikely to get caught.
- \_\_\_\_\_ 27. I have said something bad about a friend behind his or her back. (R)
- \_\_\_\_\_ 28. When I hear people talking privately, I avoid listening.
- \_\_\_\_\_ 29. I have received too much change from a salesperson without telling him or her. (R)
- \_\_\_\_\_ 30. I always declare everything at customs.
- \_\_\_\_\_ 31. When I was young I sometimes stole things. (R)
- \_\_\_\_\_ 32. I have never dropped litter on the street.
- \_\_\_\_\_ 33. I sometimes drive faster than the speed limit. (R)
- \_\_\_\_\_ 34. I never read sexy books or magazines.
- \_\_\_\_\_ 35. I have done things that I don't tell other people about. (R)
- \_\_\_\_\_ 36. I never take things that don't belong to me.
- \_\_\_\_\_ 37. I have taken sick-leave from work or school even though I wasn't really sick. (R)
- \_\_\_\_\_ 38. I have never damaged a library book or store merchandise without reporting it.
- \_\_\_\_\_ 39. I have some pretty awful habits. (R)
- \_\_\_\_\_ 40. I don't gossip about other people's business.

*Note:* (R) indicates reverse scoring.

Scale used with permission of author.

## Appendix B

## Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1965)

Instructions: Below is a list of statements dealing with your general feelings about yourself. If you strongly agree, write "1". If you agree with the statement, write "2". If you disagree, write "3". If you strongly disagree, write "4".

- |  | 1                 | 2     | 3        | 4                    |
|--|-------------------|-------|----------|----------------------|
|  | Strongly<br>Agree | Agree | Disagree | Strongly<br>Disagree |
- \_\_\_\_\_ 1. On the whole, I am satisfied with myself. (R)
  - \_\_\_\_\_ 2. At times, I think I am no good at all.
  - \_\_\_\_\_ 3. I feel that I have a number of good qualities. (R)
  - \_\_\_\_\_ 4. I am able to do things as well as most other people. (R)
  - \_\_\_\_\_ 5. I feel I do not have much to be proud of.
  - \_\_\_\_\_ 6. I certainly feel useless at times.
  - \_\_\_\_\_ 7. I feel that I'm a person of worth, at least on an equal plane with others. (R)
  - \_\_\_\_\_ 8. I wish I could have more respect for myself.
  - \_\_\_\_\_ 9. All in all, I am inclined to feel that I am a failure.
  - \_\_\_\_\_ 10. I take a positive attitude toward myself. (R)

*Note:* (R) indicates reverse scoring.

The scale may be used without explicit permission. Accessed June 30, 2011.  
<http://www.yorku.ca/rokada/psycetest/rosenbrg.pdf>

## Appendix C

## Psychological Discomfort

Please use the scale below, from 1 to 7, to rate how much, *right now*, you feel:

1. Uncomfortable \_\_\_\_\_

2. Uneasy \_\_\_\_\_

3. Bothered \_\_\_\_\_

Does not apply at all    1    2    3    4    5    6    7    Applies very  
much

[based on Elliot and Devine (1994) and Galinsky et al.(2000)]

4. *How do you feel about yourself at this very moment?*

1	2	3	4	5	6	7
delighted	pleased	mostly satisfied	mixed (about equal satisfied and dissatisfied)	mostly unsatisfied	unhappy	terrible

[based on the D-T scale from Andrews & Withey (1974) and Harmon-Jones et al.(1997)]

## Appendix D

## Self-Compassion Scale (SCS; Neff, 2003a)

## HOW I TYPICALLY ACT TOWARDS MYSELF IN DIFFICULT TIMES

Please read each statement carefully before answering. To the left of each item, indicate how often you behave in the stated manner, using the following scale:

1	2	3	4	5	6	7
Almost Never						Almost Always

- \_\_ 1. I'm disapproving and judgmental about my own flaws and inadequacies. (R)
- \_\_ 2. When I'm feeling down I tend to obsess and fixate on everything that's wrong. (R)
- \_\_ 3. When things are going badly for me, I see the difficulties as part of life that everyone goes through.
- \_\_ 4. When I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world. (R)
- \_\_ 5. I try to be loving towards myself when I'm feeling emotional pain.
- \_\_ 6. When I fail at something important to me I become consumed by feelings of inadequacy. (R)
- \_\_ 7. When I'm down and out, I remind myself that there are lots of other people in the world feeling like I am.
- \_\_ 8. When times are really difficult, I tend to be tough on myself. (R)
- \_\_ 9. When something upsets me I try to keep my emotions in balance.
- \_\_ 10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.
- \_\_ 11. I'm intolerant and impatient towards those aspects of my personality I don't like. (R)

- \_\_ 12. When I'm going through a very hard time, I give myself the caring and tenderness I need.
- \_\_ 13. When I'm feeling down, I tend to feel like most other people are probably happier than I am. (R)
- \_\_ 14. When something painful happens I try to take a balanced view of the situation.
- \_\_ 15. I try to see my failings as part of the human condition.
- \_\_ 16. When I see aspects of myself that I don't like, I get down on myself. (R)
- \_\_ 17. When I fail at something important to me I try to keep things in perspective.
- \_\_ 18. When I'm really struggling, I tend to feel like other people must be having an easier time of it. (R)
- \_\_ 19. I'm kind to myself when I'm experiencing suffering.
- \_\_ 20. When something upsets me I get carried away with my feelings. (R)
- \_\_ 21. I can be a bit cold-hearted towards myself when I'm experiencing suffering. (R)
- \_\_ 22. When I'm feeling down I try to approach my feelings with curiosity and openness.
- \_\_ 23. I'm tolerant of my own flaws and inadequacies.
- \_\_ 24. When something painful happens I tend to blow the incident out of proportion. (R)
- \_\_ 25. When I fail at something that's important to me, I tend to feel alone in my failure. (R)
- \_\_\_\_\_ 26. I try to be understanding and patient towards those aspects of my personality I don't like.

*Note:* (R) indicates reverse scoring.

Scale available for research purposes without explicit permission of author. Accessed June 30, 2011. <http://www.self-compassion.org/scales-for-researchers.html>

## Appendix E

## State Self-Esteem Scale (SSES; Heatherton &amp; Polivy, 1991)

1	2	3	4	5
not at all	a little bit	somewhat	very much	extremely

1. I feel confident about my abilities
  2. I am worried about whether I am regarded as a success or failure. (R)
  3. I feel satisfied with the way my body looks right now.
  4. I feel frustrated or rattled about my performance. (R)
  5. I feel that I am having trouble understanding things that I read. (R)
  6. I feel that others respect and admire me.
  7. I am dissatisfied with my weight. (R)
  8. I feel self-conscious. (R)
  9. I feel as smart as others.
  10. I feel displeased with myself. (R)
  11. I feel good about myself.
  12. I am pleased with my appearance right now.
  13. I am worried about what other people think of me. (R)
  14. I feel confident that I understand things.
  15. I feel inferior to others at this moment. (R)
  16. I feel unattractive.
  17. I feel concerned about the impression I am making. (R)
  18. I feel that I have less scholastic ability right now than others. (R)
  19. I feel like I'm not doing well. (R)
  20. I am worried about looking foolish. (R)
- Note:* (R) indicates reverse scoring.

Scale used with permission of authors.

## Appendix F

The Warwick-Edinburgh Mental Well-Being Scale (WEMWBS; NHS Health Scotland, 2006)

Below are some statements about feelings and thoughts.

Please tick the box that best describes your experience at this moment, right now, of each.

Statements	None of the time	Rarely	Some of the time	Often	All of the time
I am feeling optimistic about the future					
I am feeling useful					
I am feeling relaxed					
I am feeling interested in other people					
I have energy to spare					
I am dealing with problems well					
I am thinking clearly					
I am feeling good about myself					
I am feeling close to other people					
I am feeling confident					
I am able to make up my own mind about things					
I am feeling loved					
I am interested in new things					
I am feeling cheerful					

Warwick-Edinburgh Mental Well-Being Scale (WEMWBS)

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Note: Used and modified to present tense with permission of Sarah Stewart-Brown

"The Warwick-Edinburgh Mental Well-being Scale was funded by the Scottish Executive National Programme for improving mental health and well-being, commissioned by NHS Health Scotland, developed by the University of Warwick and the University of Edinburgh, and is jointly owned by NHS Health Scotland, the University of Warwick and the University of Edinburgh."

Appendix G

Validity Questions

1	2	3	4	5
Not at all	not very	somewhat	quite	completely

1. Please rate how *honest* you were while completing this study.
2. Please rate how *attentive* you were while completing this study.
3. Please rate how *distracted* you were while completing this study.



## Appendix H

## Manipulation Checks

Self-compassion (taken from Neff, 2003a; rated on the scale that follows the 3 questions):

1. In this exercise I tried to think about myself in a more kindly way.
2. In this exercise I considered whether my negative experience was something that other people might also encounter, not just me.
3. In this exercise I tried to be aware of my feelings about my negative experience more objectively, without getting so caught up in them.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

Scale available for research purposes without explicit permission of author. Accessed June 30, 2011. <http://www.self-compassion.org/scales-for-researchers.html>

Self-affirmation (Napper et al., 2009; rated on the scale that follows the 5 questions):

4. This exercise made me think about positive aspects of myself.
5. This exercise made me focus my attention on who I am.
6. This exercise made me aware of things I value about myself.
7. This exercise made me think about things personally important to me.
8. This exercise made me think about my values.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

Self-affirmation manipulation check used with permission of authors.

## Appendix I

## BIDR Experience Listing Training Module

Again, there are two different types of questions in this measure. In order to be sure that you understand the difference between congruent and incongruent, we have a short training procedure. After your response, you will receive feedback to see if you made the correct selection.

## 1. I never make silly mistakes

Please select one of the following responses that is a **congruent** response.

- a) I am very careful and go slowly so that I don't make silly mistakes.
- b) I go quickly when I answer questions so I quite often make silly mistakes.
- c) On multiple choice tests I always lose marks because I didn't read the questions carefully.
- c) I don't worry about details so I sometimes make stupid mistakes.

If the subject chooses a) they will receive feedback that they have made the correct choice and will be taken to the 2<sup>nd</sup> training question. If the subject makes an incorrect choice, they will get the message: "You have made an incorrect choice. If you look at the question carefully, you will see that it says you *never* make silly mistakes. Your choice said that you *often* make silly mistakes. Try again." This will repeat until they get the correct response.

## 2. I am always friendly to sales people.

Please select one of the following responses that is an **incongruent** response.

- a) I often end up chatting with sales people, even at the coffee shop.
- b) There was a time when I was really frustrated with the store's policies and I was not very friendly to the salesperson.
- c) There is a really difficult salesperson at a store where I shop frequently. I have worked to develop a friendship with him.
- d) I figure you get better service if you are friendly so I am always friendly.

If the subject chooses a) they will receive feedback that they have made the correct choice and will be taken to the first statement of the BIDR. If the subject makes an incorrect choice, they will get the message: "You have made an incorrect choice. If you look at the question carefully, you will see that it says you are *always* friendly to sales people. Your choice was congruent (agreed) with this. You want an incongruent or contrary experience. Try again." This will repeat until they get the correct response.

Appendix J

Counselling Resource Information

Local Free Counseling Resources available to you:

University of Manitoba Student Counseling and Career Centre – 474-8592

University of Manitoba Psychological Service Centre 474-9222

Klinic 24-hour Crisis line 786-8686

## Appendix K



## DECLARATION OF INFORMED CONSENT (Phase 1)

Research Project Title: Self-Perception and negative experiences

Principal Investigators: Mr. Patrick Binne, Psychology Honours Student

Ms. Karen O'Brien, Clinical Psychology Graduate Student

Dr. Edward Johnson, Psychology Research Supervisor

This consent form is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more details about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

In **this study phase (Phase 1)** you will be asked to rate your level of agreement with 120 self-related statements. These statements concern a variety of judgments about your thoughts, feelings, and day-to-day behaviors. Examples include judgments about how you act toward yourself in times of trouble, the reasons for your actions, and how you relate to others. This will take 20 to 30 minutes. You have a 48 hour window in which to complete the survey. Please read the instructions carefully before beginning each questionnaire.

All answers will be kept completely confidential so please respond as honestly as possible. Although you may omit responses to any items you do not wish to answer, it would be most helpful to our research if you respond to all statements.

The collection and storage of your data is protected by the following procedures. When you press send, your data will be sent to Surveygizmo in a secure, encrypted form (SSL) and will be securely stored at Surveygizmo on a password-protected account accessible only to the Principal Investigator and Research Assistant. When data collection is complete the data will be downloaded from the Surveygizmo site to the study's research computer. Our research computer is kept in a locked laboratory room that is only accessible to the principal investigators and research adviser. Once the *entire* study (**Phase 1 and Phase 2**) is complete all responses will be deleted from Surveygizmo. Identifying information (your email address) will also be deleted from the survey collection site and from our research computer. This will render the data completely anonymous. Once the data is completely anonymous, the data will not be kept under lock and key any further and may be shared with other members of the research team as well as other investigators.

There are no expected risks for participation in this phase of the study, beyond those that

might be expected during the course of everyday life.

For your participation in this part of the study (Phase 1), you will receive **one (1)** introductory psychology participation credit. Approximately one week from now, you will receive the link for Phase 2 of this study, worth two (2) credits.

If you would like to receive an emailed summary of the results of the entire study once it has been completed please check the “Yes, I would like to receive a summary of the results” below, otherwise you will not be sent the results. We anticipate that the summary of the results will be sent out in May 2010 (05/10).

\_\_\_\_\_ YES, I would like to receive a summary of the results.

By clicking “Yes, I consent” *below* you indicate that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time (simply close the survey window), and/or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation by contacting:

Mr. Patrick Binne, Psychology Honours Student  
Ms. Karen O’Brien, Clinical Psychology Graduate Student  
Dr. Edward Johnson, Psychology Research Supervisor

This research has been approved by the Psychology/Sociology Research Ethics Board. If you have any concerns or complaints about this project, you may contact any of the above-named persons or the Human Ethics Secretariat. If you would like a printed copy of this page, please use the print option for your browser.

## Appendix L



## DECLARATION OF INFORMED CONSENT (Phase 2) – Condition 1

Research Project Title: Self-Perception and negative experiences  
 Principal Investigators: Ms. Karen O'Brien, Clinical Psychology Graduate Student  
 Mr. Patrick Binne, Psychology Honours Student  
 Dr. Edward Johnson, Psychology Research Supervisor

This consent form is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

In **this study phase (Phase 2)** As in Phase 1, you will be asked to rate your level of agreement with 114 self-related statements. These statements concern a variety of judgments about your thoughts, feelings, and day-to-day behaviors. Some statements will be the same as in Phase 1 and some will be new. You will be asked to do some brief writing about 40 of these statements. This phase should take approximately 60 minutes.

All answers will be kept completely confidential so please respond as honestly as possible. Please note, however, that the investigator is legally required to break confidentiality and report to authorities (e.g., Manitoba Child and Family Services, Winnipeg Police) any person who discloses information that suggests he or she has abused a child or a person in care. Such an event could result in criminal prosecution.

Although you may omit responses to any items you do not wish to answer, it would be most helpful to our research if you respond to all statements.

The collection and storage of your data is protected by the following procedures. When you press send, your data will be sent to Surveygizmo in a secure, encrypted form (SSL) and will be securely stored at Surveygizmo on a password-protected account accessible only to the Principal Investigator and Research Assistant. When data collection is complete the data will be downloaded from the Surveygizmo site to the study's research computer. Our research computer is kept in a locked laboratory room that is only accessible to the principal investigators and research adviser. Once the *entire* study (**Phase 1 and Phase 2**) is complete all responses will be deleted from Surveygizmo. Identifying information (your email address) will also be deleted from the survey collection site and from our research computer. This will render the data completely anonymous. Once the data is completely anonymous, the data will not be kept under lock and key any further and may be shared with other members of the research team as well

as other investigators.

There are no expected risks for participation in this Phase of the study, beyond those that might be expected during the course of everyday life.

For your participation in this part of the study (Phase 2), you will receive **two (2)** introductory psychology participation credits.

If you would like to receive an emailed summary of the results of the entire study once it has been completed please check the “Yes, I would like to receive a summary of the results” below, otherwise you will not be sent the results. We anticipate that the summary of the results will be sent out in May 2010 (05/10).

\_\_\_\_ YES, I would like to receive a summary of the results.

By clicking “Yes, I consent” *below* you indicate that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time (simply close the survey window), and/or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation by contacting:

Ms. Karen O’Brien, Clinical Psychology Graduate Student

Mr. Patrick Binne, Psychology Honours Student

Dr. Edward Johnson, Psychology Research Supervisor

This research has been approved by the Psychology/Sociology Research Ethics Board. If you have any concerns or complaints about this project, you may contact any of the above-named persons or the Human Ethics Secretariat. If you would like a printed copy of this page, please use the print option for your browser.

## Appendix M



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DECLARATION OF INFORMED CONSENT (Phase 2) – Condition 2.

Research Project Title: Self-Perception and negative experiences

Principal Investigators: Ms. Karen O'Brien, Clinical Psychology Graduate Student

Mr. Patrick Binne, Psychology Honours Student

Dr. Edward Johnson, Psychology Research Supervisor

This consent form is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more details about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

In **this study phase (Phase 2)** you will be asked to describe a negative event that involved failure, humiliation or rejection, that occurred in the last five years that led to your feeling badly about yourself and to answer a few questions about the experience such as what led up to it. As in Phase 1, you will be asked to rate your level of agreement with 100 self-related statements. These statements concern a variety of judgments about your thoughts, feelings, and day-to-day behaviors. Some statements will be the same as in Phase 1 and some will be new. You will be asked to do some brief writing about 40 of these statements. Lastly, you will be asked to write briefly about the negative event you recalled in specific ways. This phase should take approximately 60 to 75 minutes.

All answers will be kept completely confidential so please respond as honestly as possible. Please note, however, that the investigator is legally required to break confidentiality and report to authorities (e.g., Manitoba Child and Family Services, Winnipeg Police) any person who discloses information that suggests he or she has abused a child or a person in care. Such an event could result in criminal prosecution.

Although you may omit responses to any items you do not wish to answer, it would be most helpful to our research if you respond to all statements.

The collection and storage of your data is protected by the following procedures. When you press send, your data will be sent to Surveygizmo in a secure, encrypted form (SSL) and will be securely stored at Surveygizmo on a password-protected account accessible only to the Principal Investigator and Research Assistant. When data collection is complete the data will be downloaded from the Surveygizmo site to the study's research computer. Our research computer is kept in a locked laboratory room that is only accessible to the principal investigator and research adviser. Once the *entire* study (**Phase 1 and Phase 2**) is complete all responses will be deleted from Surveygizmo. Identifying



information (your email address) will also be deleted from the survey collection site and from our research computer. This will render the data completely anonymous. Once the data is completely anonymous, the data will not be kept under lock and key any further and may be shared with other members of the research team as well as other investigators.

There is a risk that by describing an experience of shame that you may feel some of that same feeling again, which can be distressing. Depending on how intense this feeling is and how long it persists, you may wish to talk to a counselor about these feelings. To make it easier to contact a counselor we are providing a list of free counseling services that are available within Winnipeg. This list appears at the end of this consent form. You can navigate back to this page at any time by pressing the “back” button. You can print this page by choosing the “print current page” option in your print menu. For your participation in this part of the study (Phase 2), you will receive **two (2)** introductory psychology participation credits.

If you would like to receive an emailed summary of the results of the entire study once it has been completed please check the “Yes, I would like to receive a summary of the results” below, otherwise you will not be sent the results. We anticipate that the summary of the results will be sent out in May 2010 (05/10).

YES, I would like to receive a summary of the results.

By clicking “Yes, I consent” *below* you indicate that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time (simply close the survey window), and/or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation by contacting:

Ms. Karen O’Brien, Clinical Psychology Graduate Student  
 Mr. Patrick Binne, Psychology Honours Student  
 Dr. Edward Johnson, Psychology Research Supervisor

This research has been approved by the Psychology/Sociology Research Ethics Board. If you have any concerns or complaints about this project, you may contact any of the above-named persons or the Human Ethics Secretariat. If you would like a printed copy of this page, please use the print option for your browser.

**Local Free Counseling Resources available to you**

University of Manitoba Student Counseling and Career Centre – 474-8592

University of Manitoba Psychological Service Centre 474-9222

Klinik 24-hour Crisis line 786-8686

## Appendix N



## DECLARATION OF INFORMED CONSENT (Phase 2) – Condition 3.

Research Project Title: Self-Perception and negative experiences  
 Principal Investigators: Ms. Karen O'Brien, Clinical Psychology Graduate Student  
 Mr. Patrick Binne, Psychology Honours Student  
 Dr. Edward Johnson, Psychology Research Supervisor

This consent form is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more details about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

In **this study phase (Phase 2)** you will be asked to describe a negative event that involved failure, humiliation or rejection, that occurred in the last five years that led to your feeling badly about yourself and to answer a few questions about the experience such as what led up to it. Subsequently, you will be asked to write a brief description of how you arrived at the university today and to answer a few more questions about what you are feeling and thinking. As in Phase 1, you will be asked to rate your level of agreement with 100 self-related statements. These statements concern a variety of judgments about your thoughts, feelings, and day-to-day behaviors. Some statements will be the same as in Phase 1 and some will be new. You will be asked to do some brief writing about 40 of these statements. Lastly, you will be asked to write briefly about the negative event you recalled in specific ways. This phase should take approximately 60 to 75 minutes.

All answers will be kept completely confidential so please respond as honestly as possible. Please note, however, that the investigator is legally required to break confidentiality and report to authorities (e.g., Manitoba Child and Family Services, Winnipeg Police) any person who discloses information that suggests he or she has abused a child or a person in care. Such an event could result in criminal prosecution. Although you may omit responses to any items you do not wish to answer, it would be most helpful to our research if you respond to all statements.

The collection and storage of your data is protected by the following procedures. When you press send, your data will be sent to Surveygizmo in a secure, encrypted form (SSL) and will be securely stored at Surveygizmo on a password-protected account accessible only to the Principal Investigator and Research Assistant. When data collection is complete the data will be downloaded from the Surveygizmo site to the study's research computer. Our research computer is kept in a locked laboratory room that is only

accessible to the principal investigator and research adviser. Once the *entire* study (*Phase 1 and Phase 2*) is complete all responses will be deleted from Surveygizmo. Identifying information (your email address) will also be deleted from the survey collection site and from our research computer. This will render the data completely anonymous. Once the data is completely anonymous, the data will not be kept under lock and key any further and may be shared with other members of the research team as well as other investigators.

There is a risk that by describing an experience of shame that you may feel some of that same feeling again, which can be distressing. Depending on how intense this feeling is and how long it persists, you may wish to talk to a counselor about these feelings. To make it easier to contact a counselor we are providing a list of free counseling services that are available within Winnipeg. This list appears at the end of this consent form. You can navigate back to this page at any time by pressing the “back” button. You can print this page by choosing the “print current page” option in your print menu.

For your participation in this part of the study (Phase 2), you will receive **two (2)** introductory psychology participation credits. If you would like to receive an emailed summary of the results of the entire study once it has been completed please check the “Yes, I would like to receive a summary of the results” below, otherwise you will not be sent the results. We anticipate that the summary of the results will be sent out in May 2010 (05/10).

YES, I would like to receive a summary of the results.

By clicking “Yes, I consent” *below* you indicate that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time (simply close the survey window), and/or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation by contacting:

Ms. Karen O’Brien, Clinical Psychology Graduate Student

Mr. Patrick Binne, Psychology Honours Student

Dr. Edward Johnson, Psychology Research Supervisor

This research has been approved by the Psychology/Sociology Research Ethics Board. If you have any concerns or complaints about this project, you may contact any of the above-named persons or the Human Ethics Secretariat. If you would like a printed copy of this page, please use the print option for your browser.

**Local Free Counseling Resources available to you**

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Klinik 24-hour Crisis line 786-8686

## Appendix O



## DECLARATION OF INFORMED CONSENT (Phase 2) – Condition 4.

Research Project Title: Self-Perception and negative experiences

Principal Investigators: Ms. Karen O'Brien, Clinical Psychology Graduate Student

Mr. Patrick Binne, Psychology Honours Student

Dr. Edward Johnson, Psychology Research Supervisor

This consent form is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more details about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

In **this study phase (Phase 2)** you will be asked to describe a negative event that involved failure, humiliation or rejection, that occurred in the last five years that led to your feeling badly about yourself and to answer a few questions about the experience such as what led up to it. Subsequently, you will be asked to describe your values and an experience in which you acted on your values. You will then answer a few more questions about what you are feeling and thinking. As in Phase 1, you will be asked to rate your level of agreement with 100 self-related statements. These statements concern a variety of judgments about your thoughts, feelings, and day-to-day behaviors. Some statements will be the same as in Phase 1 and some will be new. You will be asked to do some brief writing about 40 of these statements. This phase should take approximately 60 to 75 minutes.

All answers will be kept completely confidential so please respond as honestly as possible. Please note, however, that the investigator is legally required to break confidentiality and report to authorities (e.g., Manitoba Child and Family Services, Winnipeg Police) any person who discloses information that suggests he or she has abused a child or a person in care. Such an event could result in criminal prosecution. Although you may omit responses to any items you do not wish to answer, it would be most helpful to our research if you respond to all statements.

The collection and storage of your data is protected by the following procedures. When you press send, your data will be sent to Surveygizmo in a secure, encrypted form (SSL) and will be securely stored at Surveygizmo on a password-protected account accessible only to the Principal Investigator and Research Assistant. When data collection is complete the data will be downloaded from the Surveygizmo site to the study's research computer. Our research computer is kept in a locked laboratory room that is only accessible to the principal investigator and research adviser. Once the *entire* study (*Phase*

**1 and Phase 2**) is complete all responses will be deleted from Surveygizmo. Identifying information (your email address) will also be deleted from the survey collection site and from our research computer. This will render the data completely anonymous. Once the data is completely anonymous, the data will not be kept under lock and key any further and may be shared with other members of the research team as well as other investigators.

There is a risk that by describing an experience of shame that you may feel some of that same feeling again, which can be distressing. Depending on how intense this feeling is and how long it persists, you may wish to talk to a counselor about these feelings. To make it easier to contact a counselor we are providing a list of free counseling services that are available within Winnipeg. This list appears at the end of this consent form. You can navigate back to this page at any time by pressing the “back” button. You can print this page by choosing the “print current page” option in your print menu.

For your participation in this part of the study (Phase 2), you will receive **two (2)** introductory psychology participation credits. If you would like to receive an emailed summary of the results of the entire study once it has been completed please check the “Yes, I would like to receive a summary of the results” below, otherwise you will not be sent the results. We anticipate that the summary of the results will be sent out in May 2010 (05/10).  YES, I would like to receive a summary of the results.

By clicking “Yes, I consent” **below** you indicate that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time (simply close the survey window), and/or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation by contacting:

Ms. Karen O’Brien, Clinical Psychology Graduate Student

Mr. Patrick Binne, Psychology Honours Student

Dr. Edward Johnson, Psychology Research Supervisor

This research has been approved by the Psychology/Sociology Research Ethics Board. If you have any concerns or complaints about this project, you may contact any of the above-named persons or the Human Ethics Secretariat at 474-7122, or email [margaret\\_bowman@umanitoba.ca](mailto:margaret_bowman@umanitoba.ca). If you would like a printed copy of this page, please use the print option for your browser.

**Local Free Counseling Resources available to you**

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University of Manitoba Psychological Service Centre 474-9222

Klinik 24-hour Crisis line 786-8686

## Appendix P



## DECLARATION OF INFORMED CONSENT (Phase 2) – Condition 5.

Research Project Title: Self-Perception and negative experiences  
 Principal Investigators: Ms. Karen O'Brien, Clinical Psychology Graduate Student  
 Mr. Patrick Binne, Psychology Honours Student  
 Dr. Edward Johnson, Psychology Research Supervisor

This consent form is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more details about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

In **this study phase (Phase 2)** you will be asked to describe a negative event that involved failure, humiliation or rejection, that occurred in the last five years that led to your feeling badly about yourself and to answer a few questions about the experience such as what led up to it. Subsequently, you will be asked to write briefly about the experience in specific ways and to answer a few more questions about what you are feeling and thinking. As in Phase 1, you will be asked to rate your level of agreement with 100 self-related statements. These statements concern a variety of judgments about your thoughts, feelings, and day-to-day behaviors. Some statements will be the same as in Phase 1 and some will be new. You will be asked to do some brief writing about 40 of these statements. This phase should take approximately 60 to 75 minutes.

All answers will be kept completely confidential so please respond as honestly as possible. Please note, however, that the investigator is legally required to break confidentiality and report to authorities (e.g., Manitoba Child and Family Services, Winnipeg Police) any person who discloses information that suggests he or she has abused a child or a person in care. Such an event could result in criminal prosecution. Although you may omit responses to any items you do not wish to answer, it would be most helpful to our research if you respond to all statements.

The collection and storage of your data is protected by the following procedures. When you press send, your data will be sent to Surveygizmo in a secure, encrypted form (SSL) and will be securely stored at Surveygizmo on a password-protected account accessible only to the Principal Investigator and Research Assistant. When data collection is complete the data will be downloaded from the Surveygizmo site to the study's research computer. Our research computer is kept in a locked laboratory room that is only accessible to the principal investigator and research adviser. Once the *entire* study (**Phase 1 and Phase 2**) is complete all responses will be deleted from Surveygizmo. Identifying

information (your email address) will also be deleted from the survey collection site and from our research computer. This will render the data completely anonymous. Once the data is completely anonymous, the data will not be kept under lock and key any further and may be shared with other members of the research team as well as other investigators.

There is a risk that by describing an experience of shame that you may feel some of that same feeling again, which can be distressing. Depending on how intense this feeling is and how long it persists, you may wish to talk to a counselor about these feelings. To make it easier to contact a counselor we are providing a list of free counseling services that are available within Winnipeg. This list appears at the end of this consent form. You can navigate back to this page at any time by pressing the “back” button. You can print this page by choosing the “print current page” option in your print menu.

For your participation in this part of the study (Phase 2), you will receive **two (2)** introductory psychology participation credits. If you would like to receive an emailed summary of the results of the entire study once it has been completed please check the “Yes, I would like to receive a summary of the results” below, otherwise you will not be sent the results. We anticipate that the summary of the results will be sent out in May 2010 (05/10). \_\_\_\_ YES, I would like to receive a summary of the results.

By clicking “Yes, I consent” *below* you indicate that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time (simply close the survey window), and/or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation by contacting:

Ms. Karen O’Brien, Clinical Psychology Graduate Student  
 Mr. Patrick Binne, Psychology Honours Student  
 Dr. Edward Johnson, Psychology Research Supervisor

This research has been approved by the Psychology/Sociology Research Ethics Board. If you have any concerns or complaints about this project, you may contact any of the above-named persons or the Human Ethics Secretariat. If you would like a printed copy of this page, please use the print option for your browser.

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 University of Manitoba Psychological Service Centre 474-9222  
 Klinik 24-hour Crisis line 786-8686