Activating the inner caregiver: The role of support-giving schemas in increasing state self-compassion

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HIGHLIGHTS

► Contextual activation of support-giving schemas increased state self-compassion.
► Support-giving schemas were activated via recalled or actual support-giving behavior.
► Self-compassion was assessed for a recalled negative event and a test failure.
► Effects were not explained by mood, self-esteem, or awareness of others' problems.

ARTICLE INFO

ABSTRACT

Self-compassion, which involves treating one's own suffering with compassion, mirrors the interpersonal experience of giving support to others. In four experiments we examined the hypothesis that activating support-giving schemas can increase state self-compassion. In Experiments 1 and 2, participants first recalled a negative event (Experiment 1) or experienced a lab-based test failure (Experiment 2), then were randomly assigned to recall an experience of giving support to versus having fun with another person, and finally completed a measure of state self-compassion. Experiments 3 and 4 examined the effects of actually giving support to another person (via written advice), compared to not giving support or simply reading about another's problem, and assessed effort invested in writing a self-comforting statement, operationalized as statement length (Experiment 3), and self-reported self-compassion (Experiment 4). As predicted, both forms of support-giving schema activation increased self-compassion. Alternative explanations involving affect, self-esteem, and awareness of others' problems were addressed. These results suggest that one way to increase compassion for the self is to give it to others.

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Introduction

Recent research suggests that self-compassion has numerous psychological benefits, but little work has experimentally examined the contextual factors that give rise to it. Because self-compassion mirrors the interpersonal process of giving support to others, we propose that activating support-giving schemas may increase compassion directed at the self.

Self-compassion

Self-compassion involves approaching one's own suffering with an attitude of kindness and nonjudgmental understanding (Neff, 2003a). Self-compassion is especially relevant in the context of negative events such as failure or rejection, when people are more likely to be self-critical. Neff (2003a) identified three components of self-compassion:

self-kindness, or being understanding and patient with negative aspects of the self; common humanity, or recognizing that making mistakes is part of being human; and mindfulness, or taking a balanced, non-judgmental approach to negative emotions. Although similar to self-esteem, self-compassion is conceptually and empirically distinct: unlike self-esteem, self-compassion is non-evaluative and helps people confront their weaknesses without being either self-deprecating or self-enhancing (Neff, Kirkpatrick, & Rude, 2007). Furthermore, self-compassion uniquely predicts a number of positive outcomes above and beyond self-esteem, such as more balanced reactions to stressful events (Leary, Tate, Adams, Allen, & Hancock, 2007), greater self-worth stability (Neff & Vonk, 2009), and lower narcissism (Neff, 2003b).

Self-compassion is associated with positive psychological and social functioning. Self-compassionate people are lower in symptoms of anxiety and depression, even when controlling for self-esteem (Neff et al., 2007), and self-compassion-focused therapeutic interventions reduce shame and self-criticism (Gilbert & Procter, 2006). Rather than being a form of self-indulgence or complacency, self-compassion is associated with taking the initiative to make positive changes (Neff et al., 2007), engaging in constructive relationship-maintenance behaviors (Baker & McNulty,

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2011), and pursuing mastery goals in academic settings (Neff, Hseih, & Dejitthirat, 2005). In addition, inducing self-compassion has been shown to increase self-improvement motivation (Breines & Chen, 2012). Given such wide-ranging benefits of self-compassion, it is important to identify factors that increase or decrease it.

The role of support-giving schemas

Although there is likely to be some degree of cross-situational stability in self-compassion, it may also be sensitive to the social context, so that self-compassion differs in various situations. To date, the overwhelming majority of research on self-compassion has assessed the construct as a stable trait, with little research examining how situational factors influence self-compassion levels in a given context. In particular, the experience of giving support to another person may in turn increase the likelihood that people will take a supportive attitude towards themselves while their support-giving schemas are activated. Although one might suspect that giving support to others would reduce self-focus, orienting people towards others' needs rather than their own, we propose that this relational orientation may in fact facilitate self-compassion.

Self-compassion is an *intra*personal supportive exchange that mirrors *inter*personal supportive exchanges and thus may be momentarily increased by the contextual activation of such exchanges. Much of the research on the influence of relationships on the self has focused on examining how *others' behavior towards the self* influences self-relevant processes and outcomes. For example, priming representations of critical versus accepting significant others led participants to make corresponding self-evaluations (Baldwin, 1992, 1994; Baldwin, Carrell, & Lopez, 1990), and expecting to receive social support led participants to make less use of self-denigrating coping strategies (Pierce & Lydon, 1998). One of the basic tenets of attachment theory states that representations of others' behavior towards the self shape internal working models of self, such as beliefs about being worthy of love (e.g., Bartholomew & Horowitz, 1991; Bowlby, 1982; Hazan & Shaver, 1987). Consistent with attachment theory, research suggests that self-compassionate adults are more likely to have supportive rather than critical mothers (Neff & McGeehee, 2010). Far less research, however, has explored the influence of *one's own behavior towards others* on the self. We propose that self-compassion is likely to be influenced by the priming of interpersonal schemas related to one's own behavior towards others—specifically those involving giving support. The way we treat ourselves in difficult times may be just as much due to the salience of interpersonal schemas related to giving support as they are to schemas related to receiving support.

Cross-sectional and longitudinal research provides mixed evidence for a linkage between compassion for others and compassion for the self. Neff and Pommier (2012) found a positive association between trait self-compassion and some measures of other-focused concern (i.e., forgiveness and perspective taking) in both undergraduates and community adult samples, but in the undergraduate samples trait self-compassion was not significantly correlated with compassion for humanity, empathic concern, or altruism. Consistent with previous research showing that undergraduates tend to report being kinder to others than they are to themselves (Neff, 2003b; Pommier, 2011), this finding seemed to be driven by a sub-group of participants who were low in self-compassion but high in empathic concern (Neff & Pommier, 2012). Other studies, by contrast, have found a positive association between compassion for others and for the self among undergraduates: for example, a longitudinal study showed that incoming college freshman who held more compassionate goals towards their roommates also had higher levels of self-compassion (Crocker & Canevello, 2008). In addition, recent fMRI research found that self-compassion engages brain regions that are also involved in feeling compassion towards others (Longe et al., 2009), suggesting that caring for the self and caring for others may be neurologically linked. None of this research, however, addresses the question of whether the contextual activation of support-giving schemas may increase self-compassion in the moment, independent of trait levels of compassion or self-compassion. Furthermore, although some past research suggests that self-compassion and compassion for others may not be correlated at the trait level, we hypothesized that momentary activation of support-giving schemas might lead individuals to show greater state self-compassion.

The present experiments

Prior research has considered self-compassion primarily as a trait and has focused on assessing its correlations with various other traits and behaviors. An important next step is to examine how interpersonal processes may influence levels of state self-compassion. In four experiments, we tested the hypothesis that activating support-giving schemas can increase self-compassion. The first two experiments examined whether activating a support-giving schema by having participants think about giving support to a friend led to greater self-compassion for a recalled negative event (Experiment 1) and a lab-based academic failure (Experiment 2). Because research suggests that giving can increase positive mood (Dunn, Aknin, & Norton, 2008), and positive mood could in turn increase positive self-directed attitudes such as self-compassion, in both experiments we included a control condition in which participants were asked to think about having fun with a friend, an experience that is likely to be associated with positive mood. By having participants in this control condition write about a friend, we also controlled for any effects due to the activation of positive interpersonal schemas more generally.

In Experiments 3 and 4, support-giving schemas were activated by having participants actually give support (i.e., written suggestions to someone going through a romantic break-up, Experiment 3, or someone who recently got into a car accident, Experiment 4) compared to a control condition in which participants were not asked to give support (Experiments 3 and 4), or a control condition where they read about another person's problem without giving support (Experiment 4). The latter control condition allowed us to address the alternative explanation that self-compassion is increased simply by reminding people that others have problems, rather than because of something specific to giving support. As a dependent measure in Experiment 3, we assessed length of the self-comforting statement that participants wrote regarding a recalled personal negative event, as an index of the effort they expended towards being self-compassionate. Experiments 1, 2, and 4 used self-report measures of state self-compassion. Across experiments, we expected that participants in the support-giving schema condition (i.e., those who were asked to give support) would exhibit greater self-compassion compared to control participants.

Experiment 1

Experiment 1 compared the effects of activating a support-giving schema with those of a positive interpersonal schema unrelated to support-giving. Participants recalled a time when they gave support to a friend (experimental condition), or had fun with a friend (control condition), and then reported their state self-compassion regarding a personal negative event that they wrote about before the manipulation.

Method

Participants. Sixty-three undergraduates (61% female) participated for course credit. Five were excluded from the analyses for non-compliance with the manipulation instructions, leaving a final sample of 58. Fifty-seven percent of participants identified themselves as Asian-American, 19% as European-American, 14% as Latino/a, and 2% as African-American. The remainder identified as "Other" or did not indicate their ethnicity. Participants ranged in age from 18 to 29 ($M = 20.6$, $SD = 2.4$).

Procedure. Participants were told that the purpose of the experiment was to understand the relationship between personality and autobiographical memory. Participants first spent 3 min writing about a recent negative event that involved failure, rejection, or humiliation and that made them feel bad about themselves (Leary et al., 2007). They also rated how long ago the event occurred, how upsetting it was at the time, and how bad they still feel about themselves due to the event. Participants were then randomly assigned to one of the two conditions. In the support-giving schema condition, participants were asked to recall a time when they gave emotional support to a good friend and describe it for 2 min. Participants in the control condition were asked to do the same for a time when they had fun with a good friend, a task intended to activate a positive interpersonal schema unrelated to support-giving.

After writing the event description participants filled out measures of self-esteem and affect. Following the stem "Right now, how much do you feel…", state self-esteem was assessed with two items: good about myself and proud ($\alpha = 0.73$, $M = 2.97$, $SD = 0.98$). Positive affect was assessed with six items: happy, content, and reverse-scored sad, upset, angry, and disappointed ($\alpha = 0.86$; $M = 3.78$, $SD = 0.88$).[1] Self-esteem and affect ratings were made using 5-point scales ($1 = Not at all$, $5 = A lot$).

Next, state self-compassion was assessed using an adapted version of the self-compassion scale (SCS; Neff, 2003b), which asks participants to reflect on how they generally behave towards themselves in difficult times. The SCS has demonstrated convergent and discriminate validity (Neff, 2003b). For the present experiment, participants were asked to indicate how much they agreed with the statements regarding the negative event they had previously recalled ($1 = Strongly Disagree$, $7 = Strongly Agree$). The scale was shortened to 16 items and reworded to reflect current feelings regarding the recalled negative event. For example, the item "Right now, I'm being understanding towards myself" was used in place of the original item "I try to be understanding and patient towards those aspects of my personality I don't like," and "A lot of people have negative experiences, I'm not the only one" was used in place of "When things are going badly for me, I see the difficulties as part of life that everyone goes through." Where applicable, we also removed stems such as "When I fail at something important to me" and "When I feel inadequate in some way…" because they do not make sense in a state context. Because the original measure was created for trait-level ratings, some items were less meaningful or even misleading for "in the moment" ratings — thus, we omitted or, when possible, reworded items like this for the revised scale. We included at least two items from each subscale to capture the full breadth of the original scale.[2] See Appendix A for the complete list of items. The adapted scale was significantly positively correlated with a measure of trait self-compassion that was included in a prescreening survey ($r = 0.61$, $p < 0.001$) and it was internally consistent ($\alpha = 0.76$; $M = 4.70$, $SD = 4.70$).

Finally, participants completed demographic questions and a suspicion probe and then were debriefed.

Results and discussion. Most of the negative events described involved academic or social experiences and occurred within the past 2–3 years. In response to the suspicion probe, no one guessed the hypothesis that thinking about giving support might increase self-compassion. Neither gender nor ethnicity interacted with condition to predict self-compassion in this or any of the subsequent studies, so these variables will not be discussed further.

State self-compassion scores were marginally significantly higher in the experimental condition ($M = 4.88$) than in the control condition ($M = 4.52$), $F(1,56) = 3.96$, $p = 0.05$. Thus, recalling an experience of giving support to a friend led to greater compassion directed towards the self relative to recalling a fun experience with a friend.

State self-esteem was marginally significantly higher in the experimental ($M = 2.76$) compared to control condition ($M = 3.19$), $F(1,56) = 2.93$, $p = 0.09$, and was marginally significantly correlated with state self-compassion ($r = 0.24$, $p = .08$). Positive affect was significantly lower in the experimental ($M = 3.52$) compared to the control condition ($M = 4.05$), $F(1,56) = 5.52$, $p < 0.05$. When we controlled for the unique effects of self-esteem and positive affect on state self-compassion, the effect of condition was significant ($ps < 0.01$). Finally, when controlling for participants' ratings of the negative event (e.g., how long ago it occurred, how upsetting it was), the effect of condition was significant ($p < .05$), and marginal when controlling for how bad participants still felt about themselves ($p = .056$).

Experiment 2

Experiment 1's results suggest that the activation of support-giving schemas leads to greater self-compassion for a recalled negative event than the activation of positive interpersonal schemas more generally. In Experiment 2, we examined the effects of our support-giving schema manipulation in the context of a lab-based negative event—poor performance on a test. The purpose of using a lab-based event was to ensure that support-giving schemas increase self-compassion for negative experiences that occur *in the moment*, in addition to past events, and also to construct a more controlled setting where participants would have a similar experience.

Method

Participants. Thirty-four undergraduates (75% females) participated for course credit. Two were excluded because they did not believe that the test was real, leaving a final sample of 32. Fifty-three percent of participants identified as Asian-American, 28% as European-American, 13% as Latino/a, and the remainder as "Other." Participants ranged in age from 18 to 35 ($M = 20.2$, $SD = 3.0$).

Procedure. Participants were told that the purpose of the experiment was to understand the relationship between personality and test performance. Towards this aim, participants were first asked to complete a "cognitive" test. This test, which included some impossible questions, has been used in previous research primarily to assess cheating behavior, but was used in the present study to ensure that all participants would perform relatively poorly (Gillath, Sesko, Shaver, & Chun, 2010; Niiya, Ballantyne, North, & Crocker, 2008). After taking the test participants indicated how well they felt they performed. Next, participants were randomly assigned to one of the two conditions used in Experiment 1 (i.e., giving support to a friend vs. having fun with a friend). Next, they filled out measures of self-esteem and affect. State self-esteem was assessed with the item proud ($M = 2.44$, $SD = 1.24$), and positive affect was assessed with the same items used in Experiment 1 ($\alpha = 0.63$; $M = 4.75$, $SD = 0.77$).

Finally, participants filled out a state self-compassion scale similar to the scale used in Experiment 1 but some items were tailored to be relevant to the test failure (e.g., "A lot of people have difficulty with tests like this" instead of "A lot of people have negative experiences, I'm not the only one"). Other items remained the same or similar (e.g., "I'm trying to be understanding towards myself"). The scale was shortened to 8 items because not all of the previous items made sense in the context of the test failure (see Appendix B). The adapted scale was significantly positively correlated with a measure of trait self-compassion that was included in a prescreening survey ($r = 0.43$, $p < 0.05$) and it was adequately internally consistent ($\alpha = 0.62$; $M = 5.00$, $SD = 0.66$).

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[1] When we conducted analyses controlling for positive and negative affect items separately, the effects remained the same across studies, suggesting that increases or decreases in negative affect, perhaps due to commiseration, do not explain the effect of support-giving on self-compassion.

[2] The self-compassion scale is designed to be analyzed as a unitary measure (Neff, 2003a, 2003b) and in the self-compassion literature researchers typically analyze it in this way rather than examining individual subscales separately.

Finally, participants completed demographic questions and the same suspicion probe used in Experiment 1, and then were debriefed.

Results and discussion. All participants performed poorly on the test ($M = 3.47$ correct out of 12 questions, $SD = 1.29$), and almost all felt that they did poorly on the exam ($M = 2.13$, $SD = 1.13$) in response to the question "How well do you think you did?" which was rated on a 1–7 scale (1 = *very poorly*, 7 = *very well*). Two participants felt they performed slightly well (i.e., gave a rating of 5). Excluding them did not change the results.

As expected, state self-compassion scores were significantly higher in the experimental condition ($M = 5.27$) than in the control condition ($M = 4.76$), $F(1,30) = 5.44$, $p < 0.05$. This finding conceptually replicates Experiment 1's key finding, but extends it to a recent, lab-based negative event.

State self-esteem did not differ significantly between the experimental ($M = 2.67$) and control conditions ($M = 2.24$; $p > 0.3$), nor did positive affect ($Ms = 4.74$ and 4.75, respectively). When we controlled for the unique effects of self-esteem and positive affect on state self-compassion, the effect of condition remained significant ($ps < 0.05$). Controlling for perceived test performance, actual test performance, and college GPA also did not change the results.

Experiment 3

The results of Experiments 1 and 2 indicate that participants who thought about a time when they gave support to a friend reported greater state self-compassion for a recalled negative event as well as for a lab-based test failure, compared to participants who recalled having fun with a friend, even though thinking about having fun led to greater positive affect and marginally greater state self-esteem in Experiment 1. In Experiment 3, we used a different method of activating support-giving schemas to test our central hypothesis. Specifically, we examined whether actually giving support to another person might also lead to greater self-compassion. In this experiment the target was a stranger rather than a friend, allowing us to examine whether the effects from Experiments 1 and 2 generalize beyond close relationship contexts. Further extending Experiments 1 and 2, both of which used a positive interpersonal schema control condition (i.e., recalling a fun experience with a friend), we used a neutral control condition in this study. Using such a control condition allowed us to speak to whether the activation of support-giving schemas increases self-compassion relative to a neutral task.

To assess state self-compassion, we used an open-ended measure where participants were instructed to give themselves comforting suggestions to make themselves feel better about a recalled negative event. We operationalized state self-compassion as the length of participants' self-comforting statements, which we also coded for qualitative evidence of self-compassion. Consistent with research using amount of cognitive responses as a measure of effortful processing (e.g., Chaiken & Maheswaran, 1994; Petty & Cacioppo, 1979), we interpreted the length of these statements as an index of the effort they directed at comforting themselves. Using this measure allowed us to bolster our previous findings with a less explicit measure, thereby minimizing potential demand effects since participants would be unlikely to suspect that we were interested in the length of their responses (and in fact no participants guessed this).

Method

Participants. Sixty-five undergraduates (58% females) participated for course credit. Because the comforting statement measure was the primary dependent variable, we excluded three participants who wrote under five words in response to the open-ended prompt (e.g., "no idea"), leaving a final sample of 62. Sixty-eight percent of participants identified as Asian-American, 13% as European-American, 5% as Latino/

a, and 2% as African-American. The remainder identified as "Other" or did not indicate their ethnicity. Participants ranged in age from 18 to 36 ($M = 20.73$, $SD = 2.80$).

Procedure. Participants were told that the purpose of the experiment was to understand the relationship between personality, auto-biographical memory, and social perception. As in Experiment 1, participants first completed a negative event recall and follow-up questions. Following the recall, participants were randomly assigned to one of the two conditions. In the experimental condition, participants read an essay ostensibly written by another participant who had recently experienced a relationship break-up (adapted from Batson, Klein, Highberger, & Shaw, 1995), and then were asked to provide suggestions to help the other participant feel better. In the control condition, participants read about someone else's experience of walking to class (i.e., a neutral event) and did not give them suggestions.

Participants then completed measures of self-esteem and positive affect, which were assessed with the same items used in Experiment 1 (self-esteem $\alpha = 0.84$; $M = 2.12$, $SD = 1.14$ and positive affect $\alpha = 0.80$, $M = 4.25$, $SD = 0.91$). Next, participants filled out the open-ended self-compassion measure. For this measure, participants were instructed to write as many comforting suggestions as they could think of to make themselves feel better about the negative event that they had written about previously. Finally, participants completed demographic questions and the same suspicion probe used in the previous studies, and then were debriefed.

Results and discussion. Most of the negative events described involved academic or social events, and the majority occurred within the last 2–3 years. No participants indicated that they did not believe the essay written by the alleged other participant was real nor did they guess our hypothesis.

As noted, we treated the length of comforting statements as a proxy for effort expended towards being self-compassionate. Response length ranged from 8 to 187 words, with a mean of 37.74 words and a median of 29 words ($SD = 30.39$). Participants in the experimental condition wrote an average of 45.17 words (median = 39.5 words), whereas those in the control condition wrote an average of 30.78 words (median = 24 words). The distribution of the word length measure was right-skewed, so we transformed this variable using a natural log transformation and used this normally distributed variable in all subsequent analyses. The transformed response length variable was significantly greater in the experimental condition, $F(1,60) = 4.53$, $p < 0.05$, as predicted.

We also had two independent coders who were blind to condition and hypotheses rate the extent to which the self-comforting suggestions contained evidence of self-compassion. Coders used a 0–3 scale (0 = no evidence, 1 = some evidence, 2 = moderate evidence, and 3 = strong evidence) to rate each dimension of self-compassion (self-kindness, common humanity, and mindfulness), and these dimensions were then averaged to form a self-compassion composite. The two coders' ratings were reliable ($\alpha = 0.75$) and were averaged to form an overall composite. An example of a statement containing moderate to strong evidence of each aspect of self-compassion is the following: "Other people have somewhat similar problems. This isn't the end of the world. I feel like I shouldn't punish myself for it…". The overall self-compassion composite was significantly correlated with comforting suggestions' length ($r = 0.55$, $p < 0.001$), providing validation for the use of length as a measure of self-compassion. The self-compassion composite did not differ significantly across conditions, but showed the expected trend, with greater evidence of self-compassion in the experimental condition ($M = 0.92$, $SD = 0.72$), compared to the control condition ($M = 0.67$, $SD = 0.61$), $F(1,60) = 2.12$, $p = 0.15$.

The two conditions did not differ in state self-esteem or affect ($ps > 0.4$). When we controlled for each of these variables in the main analysis, the condition effect remained significant. Controlling for ratings

of the negative event also did not change the results. Finally, to address the possibility that participants in the experimental condition might have just been lengthier writers, we controlled for negative event recall length, and the effect of condition remained significant.

Experiment 3's results support our hypothesis that after writing about a negative event, giving support to another person leads to greater self-compassion relative to reading a neutral essay. This study improves on the methodology of the previous two experiments in three important ways. First, this study shows that support-giving schemas increase self-compassion even when the support is given to a stranger (Experiments 1 and 2's experimental participants recalled a time they gave support to a friend), which suggests that the benefits of support-giving schemas may generalize beyond close relationship contexts. Second, participants actually gave support to another person rather than simply recalling an instance of giving support. Third, Experiment 3 used a dependent measure that was less subject to demand effects than the self-report scales used in the first two experiments.

Experiment 4

The results of Experiment 3 indicate that actually giving support to another person increases self-compassion. In Experiment 4 we sought to replicate this finding using the same self-report measure of state self-compassion used in Experiment 1. A third control condition was added where participants read about another person's negative event without giving support. This condition was included to address the possibility that simply hearing about another person's problem is enough to increase self-compassion (i.e., hearing about someone else's problem makes people realize that others make mistakes too, thereby making people easier on themselves). Finally, to increase generalizability, we replaced the break-up essay used in Experiment 3 with a description of a minor car accident. The support-giving manipulation again involved having participants give written support to the essay writer.

Method

Participants. Ninety undergraduates (69% females) participated for course credit. Two participants in the support-giving condition were excluded for non-compliance with the manipulation instructions, and two more were excluded because they did not complete the negative event recall task (i.e., left it blank). Unlike the other 3 experiments, this experiment was conducted during a summer session that included a high proportion of visiting foreign students. Because there were language comprehension issues for many of these students, we excluded visiting participants who indicated that English was not their first language and that they had lived in the United States for less than one year ($M = 1.25$ months, $SD = 0.1$), leaving a final sample of 62. Forty-two percent of participants identified as Asian-American, 27% as European-American, 14% as Latino/a, 3% as Native-American, and 2% as African-American. The remainder were identified as "Other" or did not indicate their ethnicity. Participants ranged in age from 18 to 33 ($M = 21.69$, $SD = 3.13$).

Procedure. Participants were told that the purpose of the experiment was to understand the relationship between personality, autobiographical memory, and social perception. As in Experiments 1 and 3, participants first completed a negative event recall and follow-up questions. Following the recall, participants were randomly assigned to one of the three conditions. In the experimental condition, participants read an essay ostensibly written by another participant who had recently experienced a negative event (this time the event was causing a fender bender and damaging an older couple's car), and then were asked to provide suggestions to help the essay writer feel better, imagining that the writer were a friend of theirs. In the read-only control condition, participants read the negative event essay but were not asked to provide support. In the neutral control condition, participants read about someone else's

experience of walking to class (i.e., a neutral event) and did not give them suggestions. Participants then completed the same state self-compassion measure used in Experiment 1 (see Appendix A; $\alpha = .76$, $M = 4.53$, $SD = .67$).

Finally, participants completed demographic questions and the same suspicion probe used in the previous studies, and then were debriefed.

Results and discussion. The type and timing of negative events described resembled those of other studies. No participants indicated that they did not believe the essay written by the alleged other participant was real nor did they guess our hypothesis.

State self-compassion differed significantly across conditions, $F(2,59) = 3.27$, $p < 0.05$, with higher scores in the support-giving condition ($M = 4.87$) compared to the read-only control condition ($M = 4.42$) and neutral control condition ($M = 4.39$). Follow-up contrasts between support-giving and read-only, and between support-giving and neutral, were significant ($ps < 0.05$). Thus, as predicted, participants who gave support to another person were subsequently more self-compassionate about a personal negative event compared to participants who simply read about another person's negative event or read about a neutral event.

Experiment 4's results further support our central hypothesis that after writing about a negative event, giving support to another person leads to greater self-compassion relative to control conditions. By adding a second control condition where participants simply read about another person's negative event without giving support, it also shows that the benefits of giving support for self-compassion are not due simply to awareness of others' problems. Instead, our findings suggest that it is the activation of support-giving schemas via giving support to another person that is uniquely helpful.

General discussion

In four experiments, we found support for the hypothesis that activating support-giving schemas, both by having participants think about and actually give support, increases state self-compassion. The results of Experiments 1 and 2 indicated that participants who wrote about an experience of giving support to a friend following a recalled or lab-based negative event, respectively, were more compassionate towards themselves about that event, compared to participants who wrote about having fun with a friend (This effect was marginal [$p = .05$] in Experiment 1). The results of Experiments 3 and 4 indicated that participants who gave support to a stranger wrote longer self-comforting statements (Experiment 3) and reported greater state self-compassion (Experiment 4), compared to participants who did not give support (Experiments 3 and 4) and participants who read about another person's negative event without giving support (Experiment 4). We ruled out several potential alternative explanations, including the possibility that the effect of support-giving schemas on self-compassion is driven by positive mood, self-esteem, or simply being reminded that other people have problems too. To the best of our knowledge, these are the first experiments to demonstrate a causal link between giving support to others and giving support to oneself while caregiving schemas are activated.

These findings shed new light on research on the contextual activation of relational schemas (e.g., Baldwin, 1994). Just as schemas for *receiving* support and acceptance influence self-treatment, schemas related to *giving* support to others appear to influence self-compassion, an adaptive form of self-treatment (Neff, 2003a).

These findings also extend the literature on helping behavior by pointing to another reason why giving may benefit the giver. Research has shown, for example, that engaging in volunteer work and other kinds of helping behavior is associated with health and longevity (see Post, 2007 for a review), caring for an ailing loved one decreases mortality risk (Brown, Nesse, Vinokur, & Smith, 2003), personal sacrifice is associated with relationship satisfaction among those who are communally

motivated (Kogan et al., 2010), and monetary giving increases personal happiness (Dunn et al., 2008). Our findings suggest that giving may also increase self-compassion, at least in the moment.

Finally, our findings extend the self-compassion literature by demonstrating that in addition to representing a stable individual difference, self-compassion is sensitive to situational factors, in this case the contextual activation of support-giving schemas. Individual differences in the chronic accessibility of these schemas may also be associated with self-compassion, and other variables, such as personal deservingness beliefs, may also impact the likelihood that support-giving schemas, when activated, will be applied to the self.

It is important to note that out findings apply to the activation of support-giving schemas, not the chronic tendency for individuals to take on a caregiving role. In fact, expending copious cognitive and emotional resources on caring for others with little or no opportunity to apply that care to the self is unlikely to lead to greater self-compassion, which may help to explain why compassion for the self and others is sometimes uncorrelated at the trait level (e.g., Neff & Pommier, in press). Many caregivers experience high levels of stress and "compassion fatigue," and may be especially hard on themselves (Figley, 2002). However, some research suggests that chronic caregiving opportunities may afford mental and physical health benefits to the caregiver (e.g., Brown et al., 2003; Post, 2007). An important task for future research is to examine the factors that help to determine whether a caregiving experience will facilitate or impede self-compassion. Perhaps one factor is the extent to which a caregiver feels that they are actually making a difference for others, as opposed to feeling overwhelmed by others' suffering. Most relevant to the present research, it may also be important for support-giving schemas to be salient in the context on a negative personal event. To derive a benefit from support-giving experiences, individuals may do well to seek them out when they are themselves struggling with a negative experience.

The present findings have implications for the promotion of self-compassion in educational and clinical settings. Developing supportive self-representations and skills may help students and others cope more effectively with failure. The role of support-giving schemas may also have relevance for clinical interventions aimed at increasing self-compassion, such as Compassionate Mind Training, which is designed to activate the caregiving system (CMT; Gilbert & Procter, 2006).

Despite its strengths, the current research also has a number of limitations. First, as noted above, our findings have implications for increasing self-compassion in the moment, but they do not speak directly to the potential for longer-term interventions to increase the accessibility of support-giving schemas and in turn increase trait levels of self-compassion. Second, although we adapted items from an established self-compassion scale (Neff, 2003b), our measure of state self-compassion has not been independently validated. Thus, one task for future research will be to construct a state self-compassion scale that can be easily adapted to different contexts and methodologies. One possibility is to adapt a newly developed 12-item trait self-compassion scale (Raes, Pommier, Neff, & Van Gucht, 2011). We should also note that the scale used in Experiment 2, tailored to the test failure, is limited in its shorter length (it does not include items from all subscales), lower reliability, and lower (though still significant) correlation with the trait self-compassion scale, and Experiment 2 itself is limited by a small sample size. The use of primarily self-report measures of self-compassion is another limitation, and future research would benefit from the inclusion of more implicit and behavioral measures.

Other interpersonal experiences, such as witnessing someone else being self-compassionate (i.e., modeling), or receiving support from another person, may also increase self-compassion. Future research should examine the effects of other types of social and non-social experiences, particularly those that do not involve writing. For example, we would expect that just taking the perspective of someone who is giving support, or just giving physical support (e.g., a hug), might also increase self-compassion. In other words, we do not assume that the

activation of support-giving schemas influences self-compassion through linguistic routes alone.

Another limitation of the present research concerns its exclusive focus on compassion for the self as an outcome variable. It is possible that schemas related to giving support to others may also increase compassion for others, whether friends, strangers, significant others, or larger social groups. Particularly interesting is the question of whether general support-giving schemas can be applied to outgroup members. Research on attachment security priming has found that interpersonal schemas related to feeling loved and supported do indeed reduce outgroup bias (Mikulincer & Shaver, 2001), but it is not clear whether support-giving schemas would follow a similar pattern. Future research would be needed to examine this question.

In sum, the present findings suggest a novel approach to understanding the influence of interpersonal processes on the self, and in particular for understanding the processes that give rise to self-compassion. Put simply, one way to increase compassion for the self in the context of a negative event may be to activate support-giving schemas by thinking about or actually providing support for others.

Acknowledgments

Appendix A

Items in revised 16-item state self-compassion scale (Experiments 1 and 4).

Right now…
I'm trying to be kind and reassuring to myself. (SK)
I'm being understanding towards myself. (SK)
I'm trying to take a supportive attitude towards myself. (SK)
It's okay to make mistakes. (SK)
I'm being hard on myself. (SJ)
I'm being intolerant towards those aspects of my personality that I don't like. (SJ).
I feel stupid. (SJ).
A lot of people have negative experiences, I'm not the only one. (CH)
Everyone makes mistakes sometimes. (CH)
Everyone feels bad about themselves sometimes. (CH)
I feel like other people have it easier than me. (IS)
These types of things seem to happen to me more than to other people. (IS)
In the scheme of things, this is not that big of a deal. (MI)
I'm taking a balanced perspective on the situation. (MI)
I keep thinking about what happened. (OI)
I feel consumed by feelings of inadequacy (OI).

Note: SK = self-kindness, SJ = self-judgment, MI = mindfulness, OI = overidentification, CH = common humanity, and IS = isolation.

Appendix B

Items in revised 8-item state self-compassion scale for test failure (Experiment 2).

Right now…
It's okay to not perform perfectly on a test. (SK)
There's always room for improvement. (SK)
I'm trying to be understanding towards myself. (SK)
I did the best I could. (SK)
I'm being hard on myself. (SJ)
I'm angry with myself (SJ).
I would guess that a lot of people have difficulty with tests like this. (CH)
Test performance is not the same as intelligence. (MI).

Note: SK = self-kindness, SJ = self-judgment, MI = mindfulness, OI = overidentification, CH = common humanity, and IS = isolation.

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