
Losing a self-expanding relationship: Implications for the self-concept

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Abstract

Previous research suggests that new relationships expand the self-concept. The present research applies concepts from the self-expansion model to examine the conditions under which relationship dissolution may influence the self-concept. We hypothesized that the more expansion provided by a relationship predissolution, the greater the contraction of the working self-concept postdissolution, and that this pattern would remain when controlling for predissolution closeness. These hypotheses were tested using recall of relationship qualities for recently dissolved relationships (Studies 1 and 2), as well as with a priming experiment (Study 3). The findings over the 3 studies supported both hypotheses. Those with higher levels of self-expansion in predissolution relationships showed more detrimental impact on their working self-concept postdissolution, even after controlling for predissolution closeness.

In many ways, the relationships we have with other people serve as cornerstones in the construction of our self-concepts (Aron, 2003). Yet, despite the central role that relationships play in our lives, we are almost inevitably faced with the loss of close relationships that are important to us. Classic theory in symbolic interactionism (e.g., Cooley, 1902) as well as recent research (e.g., Aron, Paris, & Aron, 1995; Leary & Baumeister, 2000) suggest that individuals' self-concepts are changed by the relationships they form with other people and that the interpersonal self may be more fundamental to one's self-concept than inner-directed self processes (Tice & Baumeister, 2001). This suggests that research on dissolution outcomes should focus more prominently on potential influences on the self. Understanding the effect of relationship dissolution on the self in particular is important due to the central role relationships play in most people's

lives (Aron; Berscheid & Reis, 1998). The purpose of this set of studies is to examine the impact of relationship dissolution on a person's self-concept, focusing specifically on how aspects of the relationship prior to dissolution may moderate such effects.

Relationship dissolution is typically conceptualized as a stressful event that produces a wide range of negative emotions. Two of the most stressful life events a person can experience, according to research with the Social Readjustment Scale (Holmes & Rahe, 1967), involve relationship dissolution issues (i.e., marital separation and death of a spouse). Percentages of individuals experiencing distress following relationship dissolution range from 43% to 91% in the various nonrandom North American samples of over 150 participants who have addressed this question (Dasteel, 1982; Stephen, 1987).

Postdissolution outcomes

A great deal of past research has addressed the correlates of postdissolution distress. Much of this research has focused on variables

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associated with social exchange theory such as predissolution relationship qualities, including closeness, time spent together, satisfaction, commitment, investment, and poor quality of alternatives in prospective (e.g., Attridge, Berscheid, & Simpson, 1995; Fine & Sacher, 1997; Simpson, 1987), as well as retrospective designs (e.g., Frazier & Cook, 1993; Sprecher, Felmlee, Metts, Fehr, & Vanni, 1998). Generally, these studies have found that such predissolution relationship qualities are positively correlated with postdissolution distress.

Self-related outcomes. The previous research on dissolution, however, has largely focused on the impact of loss on affective variables, with relatively less attention paid to impacts of loss on cognitive factors (Agnew, 2000). The self-concept would seem to be a particularly likely area for cognitive impacts. In this light, it is notable that some stage theory approaches to divorce adjustment speculate about how identity may change as a result of the divorce (e.g., Bohannon, 1970; Weiss, 1975). For example, Weigart and Hastings (1977) reported that divorcees describe their losses as painful and stressful in part because of threats to personal identity. In another study, a content analysis of interviews with divorced women less than a year after relationship dissolution found that 60% used descriptors such as “nonperson,” “not a part of life,” or “depersonalized” (Kohen, 1981). Similarly, others have hypothesized that when a relationship ends, aspects of the self that were formerly defined through association with the partner are also lost or changed (Haber, 1990). However, these ideas have not been tested empirically.

Self variables and emotional adjustment. Some research has focused on how predissolution self-concept variables relate to emotional adjustment postdissolution. Smith and Cohen (1993), for example, found that when the relationship accounts for a large part of self-complexity, there was more distress upon dissolution. That is, when a person has a great deal of the self defined by the relationship, losing that relationship is more distressing. Another study found that self-related reasons for dissolution (e.g., desiring independence

and becoming bored with the relationship) were positively correlated with positive emotional reactions and negatively correlated with negative emotional reactions to the breakup (Sprecher, 1994). These various findings suggest that the self-related factors may have an influence on postdissolution adjustment.

In summary, there are studies focusing on positive and negative effects of relationship loss on adjustment, studies of how such effects are moderated by predissolution relationship qualities, and even some work on how predissolution self-concept affects postdissolution adjustment. However, while some theorizing suggests it is likely to be important, we could not locate any previous studies that directly examine the relation of predissolution relationship qualities to postdissolution self-concept.

Self-expansion model

We approached this issue based on theory, employing the self-expansion model, a conceptual framework originally developed to explain a person's motivation to enter and maintain relationships (Aron & Aron, 1997; Aron, Aron, & Norman, 2001; Aron, Norman, & Aron, 1998). According to this model, people are motivated to enhance the self's capabilities through the accumulation of knowledge, experience, identities, and other resources; and that doing so in the context of a relationship leads to a feeling of self-expansion that is associated with perceived relationship quality (Lewandowski & Aron, 2004). Experienced self-expansion from engaging in novel and exciting activities with a romantic partner has also been found to enhance experienced relationship quality (Aron, Norman, Aron, McKenna, & Heyman, 2000; Reissman, Aron, & Bergen, 1993). Inclusion of other in the self is a second component of the self-expansion model that involves the extent to which one's self overlaps with the partner's self (Aron, Mashek, & Aron, 2004). Through this process, a person gains greater access to their partner's resources, perspectives, and identities, facilitating self-expansion.

Inclusion of other in the self and self-expansion are best viewed as complementary

but distinct processes. Specifically, the model argues that the opportunity for self-expansion by including another in the self is a major motivator for forming a relationship and that the experience of rapid expansion of the self from relationship formation is a major motivator for maintaining and deepening the relationship. However, it is important to emphasize that the model also posits that partners can facilitate self-expansion in ways other than by being included in one's self, such as by providing opportunities and resources for the self to expand (as well as facilitating overcoming obstacles to self-expansion) in domains outside the relationship (e.g., work, friendships, avocations). For example, if one partner has a high salary that provides sufficient resources, that may allow the other partner to explore a variety of hobbies and interests that would otherwise be inaccessible. Further, even associating the partner with self-expansion from self-expanding activities independent of the partner can lead to enhanced relationship quality (Aron, Norman, Aron, & Lewandowski, 2003). Indeed, rate of self-expansion in a relationship, as indicated by reported amount of novelty and challenge it offers, is relatively independent of the extent to which other is reported to be included in the self (Lewandowski & Aron, 2002).

More generally, self-expansion in a relationship, whether by including the partner in the self or by virtue of other processes, is posited to enhance the diversity and complexity of one's active, working self-concept. It is this aspect of the self-expansion model that is central to the present research on the effects of dissolution. That is, we posit that one result of dissolution may be a contraction of the self-concept, a lessening of its diversity and complexity. Moreover, this contraction should be accessible to the individual involved—that is, if asked, a person should be aware of a contracted self-concept. Contraction of the self-concept should also be able to be assessed directly by a change in the actual diversity and complexity of the spontaneous self-concept. Thus, the operationalizations of self-concept contraction used in the present research included both kinds of measures, measures in which participants reported on how their self-concept was affected and a measure of change

in the content of the spontaneous self-concept. In sum, the model implies that there can be loss of support for self-expansion independent of loss of inclusion of other in the self.

A pair of studies of the effects of starting a new relationship on the self-concept (Aron et al., 1995) is particularly relevant in relation to this aspect of the model. In both studies, self-concepts of mainly first- and second-year college students were assessed every 2 weeks over a 10-week period. At each testing, they were also asked about various life events over the preceding 2 weeks, buried among which were items to assess whether or not they had "fallen in love." Those participants who fell in love during the study showed significantly greater self-concept change from the testing before to the testing after, when compared to either their own testing-to-testing changes over other periods when they did not fall in love or when compared to average testing-to-testing changes for the participants who did not fall in love during the study. In one of the studies, these changes were indexed by self-report measures of self-esteem and self-efficacy in which, in effect, participants were reporting on the enhancement of their self-concept. The other study employed a direct measure of self-concept change. Participants at each testing were asked to list as many words or phrases as came to mind in response to the question "Who are you today?" The responses were then analyzed for number of different content domains they included. The result was an increase in the number of such domains. The consistent pattern of results across the two studies using these different ways of operationalizing self-concept was interpreted as consistent with the idea that beginning a relationship led to an enhancement of the self-concept.

Application of self-expansion to dissolution

Most important in the present context, the self-expansion model in general, and the results of the Aron et al. (1995) study in particular, also suggest the possibility that ending a relationship could have a detrimental influence on the self. To be more precise, self-expansion in a relationship is posited to enhance

the self because a relationship provides salient new experiences, knowledge, resources, and identities, both through inclusion of other in the self and other processes. However, when the relationship is lost, this source of salient new additions to the self is lost, so that, we argue, the self contracts. While somewhat more likely in short-term relationships, this also seems likely in the context of long-term relationships. Although the rate of new additions would presumably have diminished over time, one's long-term partner may still serve as an important source of self-expanding opportunities such as novel and challenging activities (e.g., Aron et al., 2000; Reissman et al., 1993) as well as providing a variety of resources supportive of one's self-expansion in domains outside of the relationship.

For the purpose of the present research, we operationalized relationship loss as the time when a college dating relationship dissolves. However, it is important to point out that the major impact on the self is likely to occur when a person begins to mentally disengage from the relationship (e.g., Duck & Lea, 1983). The extent to which the self contracts when one begins to mentally disengage from the relationship would also depend on how much the relationship had been a source of self-expansion. That is, if the relationship provided high levels of self-expansion, then the perception that the relationship is over should result in contraction of the self-concept. We are also aware, however, that such a result could be due to a more general process in which the greater the overall quality of a relationship, particularly the loss of the closeness it provided, the worse the self-concept following dissolution. More specifically, on the face of it, it would seem that the self-expansion model might predict direct effects of predissolution inclusion of other in the self, a central feature of closeness and relationship quality more generally on postdissolution self-concept (Aron et al., 2004). However, we did not make that prediction here because from the self-expansion perspective, much of what is included in the self from a relationship is not lost when the relationship ends, particularly in the period shortly after the end of a relationship. For example, if my partner exposed me to the

joys of sailing and taught me how to sail, this interest and ability remains after the relationship is lost.

Nevertheless, such an effect is indeed possible in light of the self-expansion model since to some extent, individuals do lose resources (e.g., access to the partner's sail boat), some of which may well be felt immediately even if one had been habituated to them. It is also important to point out that we are not arguing for the importance of one process over the other. Rather, we suggest that in the context of the influence of relationship dissolution on the self, the extent of predissolution self-expansion associated with the relationship matters over and above the extent of predissolution inclusion of the relationship partner in the self.

The Present Research

We conducted three studies to examine some central implications of the above reasoning. Studies 1 and 2 were correlational studies conducted with individuals who had very recently ended a romantic relationship. In both of these studies, predissolution relationship self-expansion was retrospectively measured using the Self-Expansion Questionnaire (SEQ; Lewandowski & Aron, 2002). This measure draws directly from several of the key components of the self-expansion model. Specifically, the 14 items assess the extent to which a person experiences increased knowledge, increased skill, increased abilities, increased mate value, enhanced life experiences, and the extent to which the partner is a source of new experiences. In sum, it provides an assessment of the amount of self-expansion a relationship provides. Studies 1 and 2 also used the Inclusion of Other in the Self Scale (IOS; Aron, Aron, & Smollan, 1992) to retrospectively assess closeness/inclusion of other in the self. Because this measure also correlates moderately to strongly with general relationship quality, it also served as a partial control for such variables (Agnew, Loving, Le, & Goodfriend, 2004; Aron et al., 1992). Postdissolution self-concept was assessed in Study 1 by coding an open-ended question on the perceived impact of the breakup and in Study 2 using a focused, structured self-report item.

Study 3 was an experiment designed to provide more direct evidence regarding degree of predissolution self-expansion being a causal influence on degree of postdissolution contraction of the self-concept. That is, it was possible that the findings of Studies 1 and 2 could be due to perceived contraction of the self-concept shaping how one perceives the degree of predissolution self-expansion the relationship provided. In Study 3, participants currently in a romantic relationship were given self-expansion primes regarding that relationship and were then led through a guided imagery task imagining the breakup. In addition to the advantages of an experimental paradigm, this design permitted us to use the measure of self-concept change taken from the Aron et al. (1995) falling in love study—the diversity of self-concept in open-ended response to “Who are you today?” administered at the start of the study (pretest) and again right after the guided imagery task (posttest).

Thus, these three studies examined the focal issues using diverse designs such as surveys and experiments; samples with diverse relationship status such as individuals who recently broke up and those currently in a relationship thinking about a potential breakup, and representing diverse college contexts such as large public university versus small private university; and diverse operationalizations of our independent variable of predissolution self-expansion including self-report and priming, and of our dependent variable diminished self-concept.

This series of three studies addressed two hypotheses based on the self-expansion model and one research question on which we did not have an unambiguous theoretical basis for making a specific prediction.

Hypothesis 1: *The more the self-expansion provided by a relationship, the greater the contraction of the working self-concept after dissolution.*

Hypothesis 2: *The basic effect tested in Hypothesis 1 remains after controlling for retrospective relationship closeness.*

Research Question: *Does predissolution relationship closeness predict postdissolution contraction of the self-concept?*

Study 1

Method

Participants

Participants were 59 undergraduates (39 females and 20 males) enrolled in introductory psychology courses at a large northeast public university who had experienced the dissolution of a romantic relationship within the past 6 months. The mean age was approximately 21 years (range = 19–27); the majority were Caucasian (52.6%), followed by Asian American (25.7%), Latin American (8.5%), African American (6.8%), and other (6.4%). Participants were recruited through an announcement posted for the psychology department subject pool to participate in a study, “Close Relationship Dynamics,” which requested participants who had experienced a breakup within the past 6 months. Mean length of the dissolved relationship was approximately 18 months (range = 4–76); average time since the relationship ended was approximately 7 weeks (range = 1–23); 44.1% reported the breakup was initiated by self, 20.3% by the partner, and 35.6% by both. Participants who met the criteria were invited to the lab and received research participation credit in their course.

Measure of predissolution self-expansion in the relationship

The SEQ (Lewandowski & Aron, 2002) assesses the extent to which a relationship is experienced as expanding the self. Example items include “How much does your partner help to expand your sense of the kind of person you are?” “How much does your partner provide a source of exciting experiences?” “How much has knowing your partner made you a better person?” and “How much do you

see your partner as a way to expand your own capabilities?" In two studies, Lewandowski and Aron found this 14-item measure to be unifactorial, with alphas of .87 and .89. In the present study, we modified instructions to focus on "the time period right BEFORE your former relationship began to break-up." Alpha in the present study was .90.

Measure of impact of breakup on self-concept

We assessed our dependent variable using responses to the open-ended question, "How were you affected by the break-up of your relationship?" Participants were given 5 min to answer this question using a sheet containing 25 blank lines. Responses were content analyzed by coding each distinct thought for whether or not it suggested a contraction or loss of identity (e.g., "I don't know who I am any more," "I feel incomplete as a person," "I feel lost as a person," "I've lost a big part of myself"), an expansion or gain in identity (e.g., "I have become a better person because of it," "I feel more independent," "I feel liberated," "I feel like I can be myself"), or some other response. The self-concept score was the number of thoughts indicating expansion minus thoughts indicating contraction. Two undergraduate coders, trained by the third author, handled the coding. Interrater reliability between the coders was 73%, with disagreements in classifications resolved by the third author.

Measure of predissolution relationship closeness

We assessed this variable with the IOS Scale (Aron et al., 1992), a single-item measure consisting of seven pairs of overlapping circles labeled to represent the self and partner, ranging from two circles with no overlap to a pair of circles that are almost completely overlapping. In a sample in romantic relationships, Aron et al. reported alternate-form reliability of .95 and test reliability over 2 weeks of .85. The scale has demonstrated predictive and construct validity as a general measure of closeness and has been widely used in relationship research. In the present context in addition to

testing Hypothesis 2, we felt that including this measure would also provide some degree of control for overall predissolution relationship quality since the IOS Scale correlates moderately to strongly with standard overall measures of relationship satisfaction, love, and commitment, both in the original study in which the IOS was developed and in subsequent research (for a review of research using the IOS Scale, see Agnew et al., 2004). In the present study, participants were instructed to respond with regard to "the time period right BEFORE your former relationship began to break-up."

Procedure

Participants completed the questionnaires individually in a laboratory setting. Order of administration was IOS Scale, SEQ, and open-ended impact of breakup item.

Results and Discussion

Descriptives

Means and standard deviations of the key variables were as follows: self-expansion ($M = 4.25$, $SD = 1.04$), inclusion of other in the self ($M = 3.59$, $SD = 1.87$), and self-concept ($M = .03$, $SD = .74$).

Hypothesis 1: The more the expansion provided by a relationship, the greater the contraction of the working self-concept after dissolution. This hypothesis was supported. Predissolution SEQ scores predicted more diminished self-concept following breakup; partial correlation (pr) = $-.26$, $p < .05$.^{1,2,3} That is, as predicted, those who reported experiencing higher levels of self-expansion in their former relationships mentioned more

1. Throughout the paper, p values testing the two hypothesized effects are one tailed; p values for the research question are two tailed. Also, consistent with other relationship dissolution research (e.g., Aron et al., 2000; Feinlee, Sprecher, & Bassin, 1990), all analyses controlled for length of relationship, so that reported effect sizes are partial correlations. However, in every case, results were very similar whether or not relationship length was included as a covariate.

negative effects and less positive effects on their self-concepts in their open-ended descriptions of the impact of the relationship loss.

Hypothesis 2: The basic effect tested in Hypothesis 1 remains after controlling for relationship closeness. This hypothesis was also supported. Predissolution SEQ scores predicted lower self-concept impact after controlling for closeness $pr = -.23, p < .05$. That is, as predicted, the overall association of experiencing higher levels of self-expansion in their former relationships with reported contraction of their self-concepts cannot be easily explained as due to ratings of self-expansion being linked to including other in the self. Further, because the IOS Scale is moderately to strongly associated with indicators of general positive relationship quality, this finding also to some extent argues against our Hypothesis 1 findings being due to self-expansion serving as a stand-in for general positive views of the relationship.

Research Question: Does predissolution relationship closeness predict postdissolution self-concept? The association was in the direction of greater closeness associated with more negative self-concept ($pr = -.16$) but was not significant ($p = .11$). Thus, the present result suggests that predissolution relationship closeness does not have a strong or even moderate relation to postdissolution self-concept. Of course, the study did not have adequate power to detect a small effect.⁴

In sum, Study 1 provided initial support for our two hypotheses using a measure of contraction of the self-concept from content analyses of open-ended responses to how the participant was affected by the breakup. Study 2 was designed to replicate Study 1, but using a structured measure of how the self-concept was affected by the breakup.

Study 2

Study 2 was identical to Study 1 except that a different measure was used for postdissolution contraction of the self-concept. The purpose of this study was to replicate the basic findings of Study 1 in another sample and with a different operationalization of the dependent variable. Using a different measure for contraction of self, especially one that expressly inquires about loss of self, was intended to provide an alternative operationalization that represents a more direct approach to construct validity than the measure of contraction used in Study 1.

Method

Participants were 63 introductory psychology students (39 women and 24 men) at a small private university in the northeast who received course credit for taking part in the study. The mean age was approximately 19 years (range = 18–21); most were Caucasian (93.7%), followed by Latin American (3.2%), and African American (3.2%); mean length of the dissolved relationship was approximately 19 months

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2. Across the two hypotheses and the research question and considering all three studies, there were only two cases in which a result was qualified by a significant interaction with time since breakup, relationship length, gender, or who initiated the relationship. In Study 1, there was an interaction of the research question test between inclusion of other in the self- and initiator status. Also, in Study 2, there was a significant interaction of the Hypothesis 2 test with self-expansion and relationship length.
 3. Analyses reported here used an index of positive minus negative responses as the dependent variable. Additionally, to account for the possibility that the amount a participant writes influenced the results, we ran the analyses with the sum of positive and negative thoughts included in the equation and obtained similar results (i.e., results remained significant and in the same direction after controlling for total thoughts). We also ran two separate sets of analyses with positive and negative identity as the lone dependent variable. In each case, we obtained the same significant results (predissolution predicting more negative and fewer positive thoughts about the effect on the self). Note that this measure asked participants explicitly about how they were affected by the breakup. Thus, the kind of analysis used in Study 3 (or in Aron et al., 1995; Study 1, on which the Study 3 analysis method is based) in which one counts the total number of thoughts or diversity of self-concept domains is not appropriate here. Instead, the focus is on how much their self-concept was perceived as enhanced versus diminished (and thus this measure is most parallel to the operationalization of self-concept expansion used in Aron et al., Study 2, which focused on self-efficacy and self-esteem).

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4. Had we predicted this result and thus used a one-tailed test for the analysis, it would not have reached significance.

(range = 2–144); average time since the relationship ended was approximately 13 weeks (range = 3–24); and 31.7% reported the breakup was initiated by self, 25.4% by the partner, and 42.9% by both.

The postdissolution self-concept measure in this study was response to the question “To what extent did you feel as though you lost part of who you are, as a result of the breakup?” answered on 7-point Likert Scale from 1 = Not at All, to 7 = Extremely.

Results and Discussion

Descriptives

Means and standard deviations of the key variables were as follows: self-expansion ($M = 4.76$, $SD = .81$), inclusion of other in the self ($M = 4.63$, $SD = 1.46$), and self-concept ($M = 3.95$, $SD = 1.99$).

Hypothesis 1: The more the expansion provided by a relationship, the greater the contraction of the working self-concept after dissolution. This hypothesis was again supported. SEQ predicted greater loss of identity; $pr = .25$, $p < .05$.

Hypothesis 2: The basic effect tested in Hypothesis 1 remains after controlling for relationship closeness. This hypothesis was marginally supported. SEQ predicted greater loss of identity after controlling for closeness (IOS Scale) scores; $pr = .21$, $p = .06$.

Research Question: Does predissolution relationship closeness predict postdissolution self-concept? Greater closeness in the relationship was significantly associated with greater loss of identity, $pr = .24$, $p < .05$.

In sum, Study 2, using a structured measure of self-concept change, replicated Study 1's support for the key Hypothesis 1 and yielded a near-significant replication for Hypothesis 2.

Study 3

Study 3 built on the findings from Studies 1 and 2 using an experimental method to help sort out causal direction of the key predicted effect. Study 3 also employed an implicit mea-

sure of change in self-concept that has been used successfully in previous self-expansion research (Aron et al., 1995).

Method

Overview

Individuals currently in a romantic relationship completed a measure of their self-concept (“Who are you today?”) that was used in Aron et al.'s (1995) study of changes in diversity of self-concept after falling in love. Each participant was then given a series of randomly ordered priming tasks focusing on specific instances in their relationships related to self-expansion (high or low) and closeness (high or low) (in a 2×2 design). After each priming task, participants completed manipulation checks related to the primes. Participants then engaged in a guided imagery task depicting a dissolution of their relationships. Other researchers have been successful using similar guided imagery procedures (e.g., Mikulincer & Arad, 1999). Following the guided imagery task, participants completed the same measure of self-concept from the pretest.

Participants

Participants were 55 undergraduates (36 women and 19 men) enrolled in introductory psychology courses at a large northeast public university who were currently in a serious dating relationship of at least 3 months. Mean age was approximately 20 years (range = 18–23);⁵ 45.5% were Caucasian, 16.4% African American, 9.1% Hispanic American, 21.8% Asian American, and 5.5% other (one nonresponse); mean relationship length was approximately 21 months (range = 3–83).

Self-concept measure

This measure was taken directly from Aron et al. (1995; Study 1). Participants are allowed

5. Four participants were excluded because their age was widely discrepant from the rest of the sample (ages of 27–52). This was also done to make the samples among the three studies reported here as similar as possible.

3 min to answer, “Who are you today?” with a series of single words or phrases. Responses are coded by assigning each word or phrase to 1 of 19 categories (e.g., direct references to the self, fatigue/boredom, occupations, roles, anxiety/stress, freedom, helping/humanitarian, high self-esteem, inquiring) derived by Aron et al. from a review of the raw lists in that study. Diversity of self-concept was the number of different categories used (McGuire & McGuire, 1988). In the present study, coding was done independently by two raters who were not aware of the participant’s experimental condition or whether they were coding pre- or postresponse lists. That is, raters were unaware if they were rating self-descriptions (in response to the “Who am I?” question) that were provided before the guided imagery, or self-descriptions that were provided after the guided imagery. Interrater reliability was .92 (calculated as a correlation between coder’s ratings of number of instances under each category). Kappa was .49 for coder’s pretest ratings and .47 for coder’s posttest ratings. Any disagreements between coders were resolved by the first author.

Manipulation checks and closeness measure

The effectiveness of the self-expansion prime was assessed with the item, “As a result of this imagery task, how much do you feel your partner enhances your sense of self?” Responses were made on a 7-point scale ranging from 1 = *not at all enhanced* to 7 = *extremely enhanced*. The effectiveness of the closeness prime (and our measure of experienced closeness) was assessed with the item, “As a result of this imagery task, how close do you feel to your partner?” Responses were made on a 7-point scale ranging from 1 = *not at all close* to 7 = *extremely close*. Finally, at the end of the entire study, just before debriefing, there were several open-ended items to determine if the participant engaged in the guided imagery: “In the imagery task, what was the reason that your relationship had to break-up?” “How much were you able to get into the imagery tasks?” “Were you caught up in what they were describing?” and “Were you really able to imagine a time like that?”

Priming procedure

Participants were tested in groups of 5–10 students. After completing the pretest self-concept measure and reading their respective recall priming tasks (described below) to themselves, they were told to close their eyes and then instructed, “Now think about an event of this kind, or one close to it, and try to think of as many details as you can. Even if what you can think of is only vaguely close to this, it is OK if that is the closest thing to this you can recall. Please keep your eyes closed thinking about what led up to it, how it felt, what happened etc. until I tell you to open them again.” This procedure was carried out using a high- or low-closeness prime and a high–self-expansion or low–self-expansion prime, with participants randomly assigned to order and conditions to create the 2 × 2 design. Instructions for the four recall tasks were as follows:

[High-closeness prime instructions]. Think back to a time in your relationship when you felt at one with your partner. That is, you personally shared your partner’s accomplishments and disappointments. In other words, you experienced your partner’s actions, feelings, and thoughts as if they were your own. Try to think of a specific time and place, when you experienced these feelings in a positive way. Visualize the details as much as you can.

[Low-closeness prime instructions]. Think back to a time in your relationship when you felt not at all as one with your partner. That is, you did not personally share your partner’s accomplishments and disappointments. In other words, you experienced your partner’s actions, feelings, and thoughts as completely separate from your own. Try to think of a specific time and place, when you experienced these feelings in a way that wasn’t particularly negative. Visualize the details as much as you can.

[High–self-expansion prime instructions]. Think back to a time in your relationship (one that is distinct from the instance you just described) when your partner greatly added to

your sense of who you are. That is, the skills and abilities that your partner possessed helped you to improve who you are as a person. As a result of the relationship with your partner, the amount of things you could accomplish, enjoy, and experience increased. Try to think of a specific time and place, when you experienced these feelings in a positive way. Visualize the details as much as you can.

[Low-self-expansion prime instructions]. Think back to a time in your relationship (one that is distinct from the instance you just described) when your partner did not particularly add to your sense of who you are. That is, the skills and abilities that your partner possessed did not particularly help you to enhance who you are as a person. As a result of the relationship with your partner, the amount of things you could accomplish, enjoy, and experience were decreased. Try to think of a specific time and place, when you experienced these feelings in a way that wasn't particularly negative. Visualize the details as much as you can.

For each event, the experimenter let them think about the event for 45 s, and then said, "Now answer the questions in Part 2. You will have 5 minutes to describe this event. Please wait for further instructions before answering the questions at the bottom of the page." The instructions in Part 2 were as follows: "In the space provided, describe the time you are remembering. What do you see? What events led up to this time? How did this make you feel? What happened next?" Participants were then given 5 min to describe the event, after which the experimenter said, "Ok, you may now stop describing the event and answer the two questions at the bottom of the sheet (the manipulation check items).

Dissolution-guided imagery task

After completing the priming tasks (including writing about the primes and the manipulation check items related to the primes), all participants, regardless of priming condition, were given the following instructions for

the guided imagery dissolution aspect of the study:

Imagine that you and your partner are forced to break-up because your partner had to be sent to a distant and undisclosed location to take part in secret military intelligence operations. These operations are not dangerous to your partner, but they will last a minimum of 10 years (possibly longer). Since your partner had been specially selected for participation when he or she was in kindergarten, your partner had no choice in deciding whether to go or not (and had forgotten about being selected). For this reason, you are not permitted to contact your partner for any reason, making the continuation of your relationship impossible. That is, you will have to end the relationship through no fault of your partner due to circumstances beyond anyone's control. Visualize the time period one or two weeks after your partner has left. (That is, long enough after your partner is gone that you had gotten over the initial shock of it.)

Although unrealistic, the scenario was constructed to create a situation in which everyone must end the relationship so that participants would be forced to consider how the loss of the relationship would influence the self. We realize that this unusual scenario precludes direct generalizability of these findings to more realistic contexts; but our main goal in Study 3 was to enhance internal validity (for external validity, we rely of course on Studies 1 and 2). After giving participants several seconds to read over the instructions, the experimenter instructed them orally to think deeply about the event for a minute or two. Then, participants were instructed to turn to the next page that read, "As you answer the following questions, please keep the imagery tasks in mind. (That is, you are not answering as your relationship actually is, but how you imagined it in the imagery tasks you just completed.)" They were told to spend 3 min on the first item (the self-concept content measure). After 3 min, the experimenter instructed participants to work on the remaining items (including imagery manipulation check questions and demographics).

Results and Discussion

Self-expansion manipulation check

Scores on the self-expansion manipulation check were higher (i.e., other person greatly added to your sense of who you are) in the high-self-expansion prime conditions ($M = 6.18$, $SD = .85$) than in the low-self-expansion prime conditions ($M = 3.84$, $SD = 1.83$). A 2 (self-expansion manipulation) \times 2 (closeness manipulation) analysis of variance was run with the self-expansion manipulation check as the dependent variable (and, as always, relationship length as a covariate). The main effect for the expansion manipulation was significant, $F(1, 49) = 24.96$, $p < .001$. Neither the main nor the interaction effect for the closeness manipulation was significant. These results suggest that the expansion manipulation was successful and that the closeness manipulation did not also create a substantial expansion effect. In addition to supporting the adequacy and specificity of our experimental manipulation of this variable, these results are consistent with the idea that self-expansion and closeness can be manipulated separately. This adds additional support to considering self-expansion and closeness (as inclusion of other in the self) as theoretically separable constructs within the larger self-expansion model.

Closeness manipulation check

Scores on the closeness manipulation check were higher (i.e., feeling closer to the partner) in the high-closeness prime conditions ($M = 6.41$, $SD = .73$) than in the low-closeness prime conditions ($M = 4.52$, $SD = 1.67$), $F(1, 49) = 19.46$, $p < .001$. Neither the main nor the interaction effect for the self-expansion manipulation was significant. These results suggest that the manipulation of closeness by the recall prime procedure was successful and were induced independently of the self-expansion experience.

Effectiveness of imagery manipulation check

Open-ended responses showed that each participant was able to recall the conditions of

their breakup and reported that the imagery tasks were engaging.

Hypothesis 1: The more the expansion provided by a relationship, the greater the contraction of the working self-concept after dissolution. This hypothesis was again supported in Study 3. Those who focused on the self-expanding aspects of their relationships reported less diverse self-concept content at posttest ($M = 3.02$, $SD = 1.18$) compared to those who focused on non-self-expanding aspects ($M = 3.65$, $SD = 1.37$) of their relationships, $pr = -.24$, $p < .05$.⁶ The pretest mean for the group that focused on self-expanding aspects was $M = 4.02$, $SD = 1.75$, compared to $M = 3.89$, $SD = 1.96$, for the group that focused on non-self-expanding aspects (pretest means were not significantly different, $t(52) = .25$, *ns*). Scores for the self-concept content measure represent the number of categories listed by participants in their description of the self. Thus, this result suggests that ending a relationship with a partner who was perceived as offering low amounts of self-expansion may result in a more diverse self-concept, while ending a relationship with a partner who was perceived as offering high amounts of self-expansion may result in a less diverse self-concept.

Hypothesis 2: The basic effect tested in Hypothesis 1 remains after controlling for relationship closeness. This hypothesis was supported. First, expansion in the relationship was manipulated independently from closeness (and the success of this independence was supported by the manipulation check results reported above). Second, we repeated the Hypothesis 1 analysis but included the closeness manipulation check as an additional covariate. Consistent with Hypothesis 2, the

6. To keep analyses consistent across studies, throughout Study 3, we employed regression (partial correlation) with condition dummy coded. (This is of course mathematically identical to the analysis of covariance that would be more usual for an experimental design of this kind.) Also, because the interaction terms in all analyses were nowhere near significant, they were dropped from the models and analyses were collapsed over the crossed condition. Finally, in each analysis we controlled for pretest self-concept by including it in the model.

result remained significant. Those who focused on the self-expanding aspects of their relationships reported less diverse self-concept content ($M = 3.10$, $SD = .26$) compared to those who focused on non-self-expanding aspects ($M = 3.59$, $SD = .23$) of their relationships, $pr = .23$, $p < .05$.

Research Question: Does predissolution relationship closeness predict postdissolution self-concept? The effect for the closeness manipulation approached significance, $pr = -.23$, $p = .10$, but was in the direction opposite to that found in Studies 1 and 2. That is, those who focused on close times in their relationships reported *more* diverse self-concept content ($M = 3.74$, $SD = .27$) compared to those who focused on less close times in their relationships ($M = 3.16$, $SD = .21$), $pr = -.23$, $p = .10$. The pretest mean for the group that focused on close times was $M = 4.11$, $SD = 1.39$, compared to $M = 3.86$, $SD = 2.08$, for the group that focused on non-self-expanding aspects (pretest means were not significantly different, $t(52) = -.50$, *ns*).

In sum, the results of Study 3 are consistent with degree of predissolution-experienced self-expansion in the relationship causing decreased postdissolution self-concept. Specifically, salience of high levels of self-expansion within the former relationship resulted in less diverse self-concepts following imagined dissolution when compared to salience of former relationships with low self-expansion. This suggests that relationship dissolution influences the self and that this influence may be moderated by the novelty and challenge (i.e., self-expansion) that had been provided by the dissolved relationship. Further, this result appears to occur above and beyond the manipulated salience of closeness and also when controlling for a self-report measure of induced feelings of closeness.

General Discussion

Based on the self-expansion model, we hypothesized that the more a relationship is self-expanding (i.e., the more one experiences the relationship as providing increased knowledge, skills, abilities, mate value, and enhanced life experiences), the more the loss of that

relationship diminishes the self-concept. We further hypothesized that this pattern would remain when controlling for relationship closeness. These hypotheses were supported across three studies utilizing correlational and experimental methods, diverse samples, and a variety of explicit and implicit measures of self-concept change. Indeed, meta-analytically combining results across the three studies ($N = 177$) yields robust overall results for both hypotheses. For our first hypothesis (the more the expansion provided by a relationship, the greater the contraction of the working self-concept after dissolution), mean effect size was $.25$, $Z = .11$, $p < .001$. For our second hypothesis (the basic effect tested in Hypothesis 1 remains after controlling for relationship closeness), mean effect size was $.22$, $Z = .10$, $p < .01$.

The present findings help fill a void in our understanding of why relationship loss affects the self and why such effects may be moderated by qualities of the relationship that was lost. These findings also represent a novel application and test of principles from the self-expansion model. Previous research (e.g., Aron et al., 1995) had supported the model's usefulness in explaining how entering a relationship influences the self. The current research extends these findings by demonstrating the self-expansion model's usefulness in describing the opposite experience of relationship dissolution. Taken together, these findings may suggest an underlying dispositional variable that leads some people to depend more on their relationships and partners for self-expansion such that they are more likely to benefit when falling in love and suffer when losing the relationship.

This set of studies also contributes to the more general dissolution literature. Past research has focused primarily on the postdissolution experience of distress. Our findings build on these findings by suggesting the possibility that a person's cognitive aspects related to the self-concept may also be influenced by relationship dissolution. While others have speculated about such influences, the present study is the first theoretically based investigation of which we are aware into the impact of dissolution on the self.

Closeness effects

We also examined whether there might be some relation of predissolution closeness, conceptualized as including other in the self, with postdissolution self-concept. However, results were not consistent across studies (meta-analytic mean effect size = .06, $Z = .03$, $p = .22$). As noted in the introduction, we speculated that such a relation might have been found because the more included in the self, the more might be lost at breakup. However, as we also noted, any such relation may be minimized because (a) much of what is included from a relationship is not lost at breakup and (b) greater inclusion may actually yield greater resilience to breakup by providing resources such as increased attachment security.

Thus, one interpretation of the results of the present study is that there is little if any direct relation of predissolution relationship closeness to effects of dissolution on the self-concept. Another possibility is that retrospective reports of predissolution including the other in the self may be only minimally accurate compared to reports of how much self-expansion was provided that may be relatively more objective and less easily distorted, so that the effect sizes in these two studies for closeness was smaller than that for self-expansion. The Study 3 findings may be due to a different phenomenon in which people may take what is included of the other as a given not easily lost. So when we primed a situation that made accessible a more diverse self, this more diverse self (rather than its loss) may have remained part of the participant's posttest spontaneous self-concept, and thus we found the small effect in that direction. These are, of course, only post hoc speculations. It should be emphasized that the present studies were not designed to focus on this issue and that further research explicitly focusing on the role of self-other inclusion may yield more interesting results, particularly if it included potential moderators of its role such as the kinds of elements included and more implicit measures of including other in the self such as response time or memory tasks (e.g., Aron, Aron, Tudor, & Nelson, 1991; Mashek, Aron, & Boncimino, 2003).

Strengths of the present research include the testing of theoretically derived hypotheses employing several different methods including the use of participants who had recently experienced a breakup (Studies 1 and 2) and a true experiment (Study 3). Additionally, each study used a distinct measure of the dependent variable including a replication of the dependent variable used in Aron et al. (1995). In each case, the same basic result emerged, supporting the robust nature of this effect. Of course, we recognize that this diversity of methodology across these studies may undermine their unambiguous equivalence in testing the same hypotheses. However, we adopted this approach intentionally in order to increase the overall construct validity by showing parallel effects using diverse procedures and measures, as well as minimizing possible alternative explanations related to possible confounds associated with procedural details of any one study. Another strength was the creation of a practical, true experimental design in which participants can be randomly assigned to relationship-relevant conditions. This design also included an experimental manipulation of dissolution that, although unrealistic, was designed to focus on issues of internal validity.

There are also some limitations of this work that hopefully will be addressed in future research. First, participants in the studies were all U.S. college students so that the present findings may not generalize to other populations. Relationship aspects of the self-concept are particularly important to college students (Smith & Cohen, 1993) as compared to older individuals. Moreover, short-term relationships typical of college students may be more affected by self-expansion processes than longer term relationships. It is also quite plausible that the impact of relationship dissolution on the self could be very different in non-Western or even other Western cultures in which the fundamental self-concept is different (Markus & Kitayama, 1991). A second limitation is the retrospective nature of the predissolution reports in Studies 1 and 2 and the necessarily artificial nature of the priming and imaging methods of Study 3. Third, the low reliabilities of the coders may be due to some form of systematic bias. However, while this possibility cannot be

ruled out, raters were not aware of the prerelationship self-expansion status of participants. Thus, any possible bias in ratings could not easily explain the pattern of results. Additionally, low reliabilities in general undermine the possibility of getting significant results so that it is possible the effects we report are underestimated.

Finally, across the three studies, controlling for closeness may not fully control for general relationship quality. Thus, it is possible that part of what is driving the relation of predissolution self-expansion to postdissolution self-concept is some colinearity of predissolution self-expansion with aspects of general relationship quality unrelated to closeness. Thus, in future research, it would be valuable to include an additional direct measure of general relationship quality.

Future research on the impact of relationship dissolution on the self (aside from replication and improvements and elaborations of methods building on what was learned here) would seem to be especially valuable in two related areas. First, efforts could be made to examine more fully the potential positive outcomes of relationship dissolution on the self-concept. The present findings suggest a link between the predissolution self-expansion and the influence of dissolution on the self. Thus, it would seem possible that ending a relationship that was very low in self-expansion has the potential to result in self-concept gains after dissolution as new opportunities for self-expansion outside the relationship become available. Second, future research could examine the ways in which self-related phenomena can be utilized to help people cope with the loss of close relationships. The present research lends support to the proposition that the self is affected by relationship dissolution. Therefore, future research might profitably address how processes related to self-expansion can help compensate for detrimental consequences on the postdissolution self-concept. For example, could providing opportunities for self-expansion in nonrelationship domains to individuals who have suffered a relationship loss help mitigate negative impacts on the self-concept?

The general aim of this research was to examine how relationship dissolution affects the self, focusing on how such effects are mod-

erated by qualities of the relationship that was dissolved. The results presented here suggest that relationship dissolution influences the self-concept and that this influence is at least partially dependent on the amount of self-expansion in the relationship prior to dissolution. Hopefully, this research will serve as a stepping-stone for broadening our understanding of the impact of relationship loss on the self.

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