RUNNING head: Decentering in Relational Narratives

Content Analysis of Expressive Writing Narratives about Stressful Relational Events Using Interpersonal Decentering

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Abstract

The present study used secondary analysis of data from two studies of expressive writing about stressful relational events to first describe the relations of word use to social-cognitive maturity of role-taking using Feffer's Interpersonal Decentering scoring system (Feffer, Leeper, Dobbs, Jenkins & Perez, 2008), then to test hypotheses about active processing of relational information vs. event closure. This scoring system for imaginative Thematic Apperception Test stories was adapted for expressive writing protocols and related to proportions of cognitive and emotional words used, relationship characteristics, and the subjective experience of writing. Relational events included relationship breakups (including divorce), loved one's illness or death, and abuse. Decentering maturity was positively correlated with cognitive and insight words and with positive emotion words in both studies' narratives, and also with self-rated experiences of emotional intensity in the low closure group only. Gender differences were consistent with gender theories applied to relational stressors.

Many studies and three meta-analyses show the efficacy of expressive writing (EW) to improve physical and psychological health (Frattaroli, 2006; Frisina, Borod, & Lepore, 2004; Smyth, 1998). There is growing interest in the language participants use in the narratives (Ramirez-Esparza & Pennebaker, 2006). Most of this work has focused on use of cognitive and emotion words to predict beneficial outcomes (Klein & Boals, 2010; Pennebaker, Mayne, & Francis, 1997). In other lines of research, content analysis scoring systems are applied to stories elicited using the Thematic Apperception Test (TAT) and similar pictures (Jenkins, 2008; Smith, Atkinson, McClelland, & Veroff, 1992). One such scoring system is Feffer's Interpersonal Decentering (Leeper, Dobbs, & Jenkins, 2008), which measures perspective-taking or taking the role of the other (role-taking; Elfers, Martin, & Sokol, 2008; Enright & Lapsley, 1980), an aspect of social cognitive maturity. Although Interpersonal Decentering has been used for personality assessment, this measure has not been applied to memories elicited by EW. Such an application might provide a coherent theoretical foundation for understanding the literature relating word counts to the benefits of EW for stressful relational events.

Our first study examined stressful relational memories using Interpersonal Decentering with college students' writing about a relationship breakup, relating maturity of Decentering to use of cognitive and emotional words and to relationship characteristics. These findings were replicated in Study 2 with a broader range of relational events that also examined self-rated experiences during the writing.

Interpersonal Decentering

Interpersonal Decentering requires mobilizing abstract internalized schemata that enable a person to be aware of and form expectations for another person's feelings, thoughts, intentions, and actions (Leeper et al., 2008). Piaget (1972) introduced his idea of decentering as part of his analysis of children's formal cognitive organization of the inanimate physical environment. He described the developmental shift from sequential processing of individual dimensions of perception to the capacity for simultaneous processing of multiple dimensions by use of abstract thought (conservation). Decentering was described as literally the ability to recognize that people see the world differently based on where they sit.

Melvin Feffer (1959, 1967) applied this concept to interpersonal functioning, with the attainment of abstract thought represented by internalization. As a kind of social conservation, decentering can be considered an aspect of social cognitive maturity attained by most cognitively intact nonpatient adults. Feffer tested these ideas using his Role-Taking Task (RTT; Feffer & Jahelka, 1968; Lowenherz & Feffer, 1969). The RTT involves the participant first telling a story about a picture of several people interacting, and then retelling the story from the different perspective of each character. The RTT scoring system measures maturity of decentering by quantifying the storyteller's differentiation among the characters' perspectives along with the degree of coordination between the several retold stories. For example, low-scoring RTT stories might show few differences among the retold stories (low differentiation), or might show so many differences that they appear to be told about characters in unrelated situations (lack of coordination).

Feffer and Jahelka (1968) developed the TAT system from the RTT by relating the RTT scores to features of the single initial story (Feffer, 1966). This study made the empirical link between role-taking ability in the RTT and the Interpersonal Decentering score of the first story. Feffer and Jahelka's (1968) analyses indicated that Decentering and RTT scores measure the same underlying construct. As a measure of spontaneous or implicit role-taking, it appears to capture an aspect of social-cognitive maturity. These higher level processes are especially difficult for individuals diagnosed with schizophrenia (Strober, 1979). Like other aspects of intelligence, it is conceptualized as including both an ability that is stable once acquired and a disposition to exercise that ability or not in specific situations.

When the Decentering scoring system is used for TAT stories, the participant tells a series of stories about pictures of different interpersonal situations, and the Decentering level is given by averaging scores across stories. However, the system can be adapted for other kinds of storylike narratives such as EW if they contain adequate scoreable interactions (Feffer et al., 2008).

Language Use in EW

To examine possible mechanisms for the salutary effects of EW, researchers have examined the language used in narratives. Participants who use a moderate percentage of emotion words and increase their use of cognitive words experience the greatest benefits (Klein & Boals, 2001; Pennebaker et al. 1997). Cognitive words indicate cognitive processing of information, including subcategories such as causal words (e.g., 'because', 'therefore') and insight words (e.g., 'understand', 'think').

Recent evidence suggests cognitive word use may reflect attempts to create a coherent narrative of the experience (Boals & Klein, 2005; Boals & Perez, 2009; Klein & Boals, 2010). People are motivated to find meaning in their experiences, which may be achieved through creating narratives (Baumeister & Newman, 1994; McAdams, 1993). Pennebaker and colleagues emphasize that story creation during EW brings a simplified, more coherent structure to the memory of upsetting experiences, ultimately leading to improvements in physical and psychological health (Ramirez-Esparza & Pennebaker, 2006). The replacement of a disorganized mental representation with one that is more integrated and coherent is currently a leading explanation for the efficacy of EW (Sloan & Marx, 2004), but these inductive inferences from empirical findings are not yet connected to theoretical deductions about the psychological and social functions filled by this use of language.

Few studies have examined the content of EW apart from word counts; none have looked at interpersonal interactions within the narrative using a coherent theoretical framework. However, participants who were asked to narrate an event from different perspectives, as though from another's viewpoint, had great psychological benefits especially for those with high anxiety (Smyth & Pennebaker, 2008). The original RTT asked participants to retell the story from different characters' perspectives (Feffer & Jahelka, 1968). Thus, decentering processes can be attributed to EW. Perhaps spontaneous use of cognitive and emotional words is a linguistic marker for the kind of social-cognitive complexity that is captured more precisely by Interpersonal Decentering. If these word counts are related empirically

to Decentering, this would suggest a more refined and theoretically interpretable picture of what makes EW helpful for resolving symptoms due to relational stress.

Study 1

The first study adapted Feffer's Decentering manual (Feffer et al., 2008) to score EW collected in Boals and Klein's (2005) study of word use in EWs about relationship breakups, relating word use to maturity of Decentering. Higher levels of Decentering involve story interactions in which participants describe one character internalizing another character, especially that character's thoughts, feelings, reflections, or intentions; or at the highest level contemplating his/her own internal processes or actions in relation to another character(s). Thus, if more mature decentering processes are to explain the associations between word use and better recovery from stressful relational events, then narratives that score higher in Decentering should contain proportionally more cognitive and emotion words compared to lower scoring narratives. However, cognitive and emotion words can be used less maturely; and such words also can be used in discussing thoughts and feelings about events and situations unrelated to other people, and disagreements over such objective conditions may be one common cause of relationship breakups that would not be part of the Decentering score. Thus, association between Decentering and word use based only on the scoring system content is not a foregone conclusion. Establishing such an association is a prerequisite for use of the decentering construct in a theoretical framework to elucidate previous word use findings as indicators of meaning-making processes (e.g., Klein & Boals, 2010).

The general hypothesis was that Decentering should be related to evidence of active cognitive and emotional processing in a relational context, as shown by word use and by self-ratings independent of the narratives. The latter are not initiating the breakup and not having recovered, both of which suggest possible unfinished business that the person might be motivated to settle. Also included is rated emotional intensity of concern with the partner's internal state, which in a romantic relationship context suggests investment in taking the partner's perspective.

Another aspect of the social cognitive processes of relationship breakups was the degree to which participants differed in Decentering when describing the pre-breakup period compared to the time during and after the breakup. This is of theoretical interest because participants might decenter for different reasons with different content before the breakup (likely recounting future-oriented anticipations about the relationship) compared to later on (more likely reflections on the past, including disconfirmed anticipations). Therefore, each hypothesis was retested in exploratory analyses using pre-breakup and post-breakup Decentering separately. Finally, because Range and Jenkins (2010) provided theoretical rationales and research recommendations for studying gender differences in EW, analyses were conducted for each gender separately as well as for the sample as a whole.

Thus, the following hypotheses were tested in Study 1:

1.1. Decentering is positively correlated with cognitive word use, especially insight words.

1.2. Decentering is positively correlated with positive emotion word use.

1.3. Decentering is negatively correlated with negative emotion word use.

1.4. Decentering is positively correlated with self-rated partner's initiation of the breakup.

1.5. Decentering is negatively correlated with self-rated recovery from the breakup.

1.6. Decentering is positively correlated with "wanting to make [partner] happy" as an intense emotional experience.

Study 1 Method

Participants. In this secondary analysis of data from Boals and Klein (2005), the initial sample was 207, 104 women and 103 men who indicated that they had experienced the breakup of a romantic relationship within the previous 12 months. The current sample was drawn randomly and gender-stratified to select 102 participants (52 men and 50 women), volunteers from Introduction to Psychology classes at a large public university in the southeastern U.S. who were given extra course credit. The sample size provided statistical power of .95 to detect medium-sized effects (r_{es} = .30) at $p < .05$ one-tailed. For the gender comparisons of associations, the subgroup sizes at the same power and $p < .05$ two-tailed could only detect very large differences, $(r_1 - r_2)_{es}$ = .74.

Procedure. Boals and Klein (2005) first asked the participants to describe characteristics of the relationship and breakup, and of the emotional intensity of various relational experiences. Participants then wrote about their past relationship break-up for 20 minutes following standard directions, after which they were asked to distinguish "the section(s) of your writings that describes when you were dating X

[from] the portion(s) of your writings that describes when you were no longer dating X" (Boals and Klein, 2005, pp. 258-259) hereafter pre-breakup and post-breakup respectively.

Measures

Linguistic Inquiry and Word Count 2007 (LIWC2007; Pennebaker, Booth, & Francis, 2007). This program was used to count the number of words used in linguistic categories. The LIWC has established validity for other psychological measures in determining proportion of words used in writing.

Emotional intensity of events. Boals and Klein (2005) gathered ratings of "the emotional intensity of the following events that may have occurred in that relationship" coded 1=No emotion to 4=Extreme emotion. "Wanting to make X happy" was chosen on theoretical grounds; scored as a Decentering interaction, it merits a Level 9 score.

Breakup characteristics. Boals and Klein (2005) administered several rating scales about the relationship and the breakup. Two were of interest for this study because they suggested greater likelihood of ongoing active processing of cognitive and emotional relational information: "who actually made the first steps to initiate the breakup", and "to what extent . . . you think you have recovered". The former was coded 1="I initiated the breakup" to 5="My partner initiated the breakup"; the latter was coded 1= "Not at all" to 5= "Completely recovered".

Feffer's Interpersonal Decentering (Feffer et al., 2008; Leeper et al., 2008). The Feffer et al. scoring manual was designed and validated for scoring stories told

about pictures, and was adapted for EW by treating them as first-person stories and the relationship partners as characters. Detailed scoring rules and practice materials are available from the first author; the present summary is not adequate for scoring. Decentering is scored by first identifying discrete interaction units, then scoring the level of each unit. An interaction unit involves the same two or more characters interacting in the same place and time. The levels range from 1-9, with Levels 1-4 representing less mature Decentering because they do not require internalization of other characters. Level 1 is scored when characters are not differentiated from each other, for example, "We went shopping", "We were in love." Levels 2-4 differentiate characters, with one character directing an action toward another character. Level 2 has no response from the other ("I tried very, very hard to make her happy"); Level 3 involves a response ("When I finally told her she gave me a hug"). Level 4 requires an action-reaction sequence with a response back to that response ("She told me she didn't like it so I stopped, and she thanked me").

Levels 5-9, the more mature levels, require internalization of a character by another such that one character is the object of another's internal state. Levels 5 and 6 are similar in that one character internalizes another, but Level 6 involves elaboration of the internalized character. "I don't want him back" (5) shows internalization because a possible future with—or in this case without--him is imagined; in "I hope that he never *does that* again"(6), the added detail of his possible future action raises the score. In Level 7, a character internalizes another character's internal state, for example "I don't think she *knew* what was going on".

At Level 8, one character internalizes another character internalizing a third character: "I knew she was obsessed with him". In Level 9 a character reflects on his or her own thought, feeling, or action in relation to another: "I thought for a while I could stay with him and make it work."

Two previously trained scorers scored the essays individually, then discussed them to reach a consensus on any disagreements. Consensus scores were used for analysis. The pre-consensus interrater reliability was satisfactory, for number of interactions Pearson's r = .71, for average Decentering level Spearman's *rho* = .82 (>.80; Smith, Feld, & Franz, 1992). To examine possible changes in the maturity of relational information processing at different phases of the relationship, the interaction units were then divided according to Boals and Klein's (2005) sections separating the pre-breakup period from the period during and after the breakup (post-breakup). Three Decentering variables were created: 1) pre-breakup, 2) post-breakup, and 3) overall, each calculated by averaging Decentering scores across the interaction units for that time period. A fourth score, post-breakup Decentering increase, was calculated by subtracting pre-breakup scores from post-breakup scores. Thus, post-breakup increase represents increasingly mature reflections on the relationship from inception to dissolution (i.e., social-cognitive growth).

Study 1 Results

Descriptive Analyses. The descriptive statistics are given in Table 1. There were no significant gender differences in means. Interpersonal Decentering scores can have some systematic method error variance if the Decentering scores are

associated with response fluency (Smith, Feld, & Franz, 1992). There was no significant correlation of number of interaction units with Decentering because averaging Decentering scores across interactions controls for response fluency bias. Cognitive words were negatively correlated with negative emotion words, -.36, $p < .01$.

Tests of Hypotheses

1.1. As the first hypothesis predicted, Decentering was positively correlated with cognitive word use, especially insight words, a medium to large effect size for the former and medium for the latter (Cohen, 1992; see Table 2) that did not differ significantly by gender.

1.2. As the second hypothesis predicted, Decentering was positively correlated with positive emotion word use overall and for men at a medium effect size, but the genders didn't differ significantly. However, women who decentered more when describing the pre-breakup period used more positive emotion words throughout their narrative than did those who decentered less, at a medium to large effect size, not true for men, Fisher $z = 2.23$, $p < .025$.

1.3. Contrary to the third hypothesis, Decentering was not negatively correlated with negative emotion word use overall or for either gender; however, men who decentered more when describing the pre-breakup period used more negative emotion words at a medium to large effect size compared to those who decentered less, not so for women, but this Fisher $z = 1.82$ was only marginally significant, $p < .07$.

1.4. In partial support of the fourth hypothesis, Decentering was positively correlated with self-rated partner's initiation of the breakup only for women who decentered more when describing the pre-breakup period, not the case for men, Fisher $z = 2.24$, $p < .025$.

1.5. In partial support of the fifth hypothesis, Decentering was negatively correlated with self-rated recovery from the breakup for women only at a medium effect size, but Fisher $z = 1.54$, $p < .13$ showed the two genders did not differ significantly, so the gender difference is equivocal.

1.6. As the sixth hypothesis predicted, Decentering was positively correlated (but only marginally) with "wanting to make [partner] happy" as an intense emotional experience overall and for men only at a small to medium effect size; the genders did not differ significantly.

Finally, we tested an unhypothesized change in Decentering over the writing process. For both genders (but more so for men), those who decentered more when writing about the breakup and its aftermath relative to the pre-breakup period (suggesting growth in social cognitive maturity) used fewer negative emotion words throughout their narratives, $r = -.26$, $p < .05$; for men $r = -.30$, $p < .05$, for women $r = -.15$, p = ns. No associations with post-breakup Decentering alone were significant.

Study 1 Discussion

Study 1's goal was to test associations of Interpersonal Decentering with use of cognitive and emotion words in narratives about college students' relationship breakups, as well as their ratings of relationship breakup characteristics.

Decentering in this study represents maturity of information processing about a stressful relational conflict in terms of perspective-taking, trying to understand the other person's view and the self-other relationship. The association of Decentering with cognitive and insight words supports the possibility that previous findings relating cognitive words to EW benefit might be explained by decentering processes when relational stressors are involved. That is, if cognitive word count is a marker variable for more mature social cognitive functioning of a sort that improves relational problem-solving by using information about the other person's perspective on the situation, then this decentering ability might both increase mutual understanding and enable less painful resolution of relationship breakups.

The importance of linking emotion and decentering processes in romantic relationships is suggested by the marginal association of Decentering with participants' independent ratings of oneself making the partner happy (a phrase that would be scored Level 9) as an intensely emotional experience, indicating an investment in the partner's emotional experience related to oneself. Although Decentering is conceptualized as a cognitive construct, emotion can be involved at all levels, since nonreflective emotion felt toward another is scored as directed action (Levels 2-4), internalizing another's feelings is scored at Level 7, and contemplating one's own feelings toward another scores at Level 9. The association of Decentering with positive emotion words suggests that those who reflect on even a defunct relationship with greater social cognitive maturity recall an overall more

positive experience than do those whose recollections involve less complex internalization of their former partner.

Although there was only a negligible average increase in Decentering level from pre- to post-breakup sections of these narratives (there was considerable variability in the direction of change), the fact that those (especially men) who increased used fewer negative emotion words throughout their narratives suggests a possible emotional benefit that merits attention in future studies. Boals and Klein (2005) found that cognitive words were used more in the relationship breakup and aftermath as compared to the pre-breakup sections, which they attributed to more searching for meaning and understanding. They did not relate this change to other variables. Although pre-post increase in Decentering was related to fewer negative words overall, suggesting a better resolution of the breakup, neither pre- nor post-breakup Decentering nor pre-post increase was related to overall cognitive words. This finding indicates that the increase in cognitive words is likely due to greater cognitive processing of self-focused or impersonal information post-breakup rather than of relational experience such as would be scored for Decentering. Thus, simple counts of cognitive words, although suggestive of hypotheses, might not capture the complex processing of social cognitive information characteristic of relationship breakups. Considering the two findings together suggests increased psychological distance when discussing the defunct relationship post-breakup for many but not all participants, and increased social-cognitive maturity for some that was associated with an overall less negative relational experience.

Rather than cognitive words, the social-cognitive dynamics of relationship breakups were shown in the changing pre-post associations of Decentering with emotion word use, and were differentiated by gender. Integrating the Study 1 findings with Range and Jenkins's (2010) review of gender theories applied to EW, the following process-oriented conceptual gender models are proposed. First, consistent with gender social role theory dictating women's responsibility when relationships fail, Study 1 women used more thorough, mature decentering processing under exactly those conditions where such responsibility might be exercised for relational problem-solving, where theory would predict they would be preoccupied with understanding their partner's perspective and reconsidering their own experiences, choices, and actions toward their partner, consistent with Stickney's (2010) commentary linking women's tendency toward rumination to their responses to EW. As if they decided while rating the relationship characteristics that they have not recovered completely from the breakup, they appear willing to engage in complex, mature processing of relational information, which yields higher Decentering scores. In doing so, they used more causal words, further supporting the problem-solving interpretation.

Women who reported that their partner initiated the breakup decentered more maturely in describing the pre-breakup period than did those who initiated the breakup themselves, theoretically using more decentering skills to understand what led to their partner ending the relationship. Women whose partner initiated the breakup faced coming to grips with what went wrong as they reflected on the

pre-breakup period, confronting gender-related role demands and socialization pressures for social-cognitive problem-solving by decentering in complex, mature terms. Those who recalled mobilizing more mature decentering processes as they reflected on the pre-breakup period also used more positive emotion words throughout. Perhaps this indicates that their initial more mature anticipations for the relationship led to a relatively positive relational experience overall.

If women who initiated the breakup themselves had already completed similar relational information processing while deciding to end the relationship (and perhaps felt fewer gender-related demands to care for it), they would have less reason to work further for such deep understanding by decentering when reflecting on the pre-breakup period in EW. Alternatively, perhaps their decentering maturity (or their investment in the relationship) was less complex from the beginning (as might be shown by lack of anticipations about the relationship's future, shown by fewer internalization-level Decentering scores), resulting in a less satisfying relationship and lower emotional reward (fewer positive words).

In contrast, the gender model for men reflects the lower gender social role theory expectation for men to take responsibility or to problem-solve in relationships. In contrast to women, men who exercised more complex and mature social cognitive processing by decentering more when describing the pre-breakup period were slightly (but not significantly) more likely to have ended the relationship, and used more negative emotion words throughout their narratives, perhaps reflecting disappointment of their pre-breakup anticipations. Those who

did less internalization-level anticipation of their future together, as might be shown by focussing on the routine back-and-forth action sequences involved in dating with less reflection on their partner's or their own needs, thoughts, and feelings, apparently were less unhappy (fewer negative words). This might serve a protective function because those men who decentered less in that part of their writing also used fewer negative emotion words throughout their narrative.

Both women and men (more so for men) whose Decentering became more mature from the pre-breakup to the post-breakup period used fewer negative emotion words throughout, suggesting that growth in Decentering as they come to terms with the final breakup confers emotional benefits, especially on men. This is consistent with Range and Jenkins's (2010) suggestion that men may benefit more from EW than women if the writing process helps them to overcome gender-related constraints on their emotional processing. Future EWresearch should include more detailed relationship characteristics that could specify the conditions under which and for whom this social cognitive maturation occurs.

Slatcher and Pennebaker (2006) found that couples used more positive words in their Instant Message conversations after the EW assignment than before, and that men who wrote about the relationship increased their negative emotion words while women tended to stay the same. In the present studies there was no significant gender difference in proportions of negative or positive emotion words, but they appeared in quite different Decentering contexts, with more mature pre-breakup Decentering in Study 1 (more comparable to Slatcher & Pennebaker's

study) being linked to opposite-valenced emotion words depending on gender, with increased Decentering levels related to fewer negative words overall.

A second issue addressed in Study 1 has implications for the extent to which EW benefit results from its elicitation of active processing of previously unexamined information about the stressful event. The finding that women who rated themselves as less recovered decentered at higher levels as well as using more causal words suggests that for this relational stressor, decentering processes might be activated as part of the subjectively unfinished recovery process. Because recovery ratings were unrelated to causal words for women, decentering processes might include women's attempts to understand their relational dynamics.

Study 2 focused on questions about this possible role of decentering processes as a form of active processing of stressful relational information, as well as replicating the word count hypotheses (Study 1's Hypotheses 1-3) in a sample presenting a broader range of interpersonal stressors. Hypothesis 2.4 examined active processing by singling out participants writing about low-closure memories, and Hypothesis 2.5 related Decentering scores to the emotional intensity and immediacy of the writing experience.

Study 2

Participants, Measures, and Procedure

Data from Boals, Banks, Hathaway, and Schuettler (2011) were analyzed as in Study 1, with the initial sample of 177 including 96 women and 81 men. This study's method differed in that a randomized half of the sample was given the

standard EW instructions for "a very negative event" and the other half was asked simply to describe the stressful experience. A random selection of narratives from half of each group, 57 women and all 60 of the men, was examined for word use by LIWC and scored for Decentering as in Study 1. To arrive at a comparable event content to Study 1, as well as to refine gender comparisons as recommended by Range and Jenkins (2010), the narrative texts were read to identify the major stressor and select those concerning relational conflict, threat, and/or loss. These were classified as Relational Conflict (with or without loss of the relationship by abandonment, breakup, divorce; or being a close bystander, e.g., to parents' divorce), Relational Abuse, Illness/Injury of Close Other, or Relational Loss by Death (of family member, partner, or very close friend, not by being a bystander to accidental death of a stranger). Two independent scorers attained interscorer reliability of kappa=.80. Disagreements between raters were discussed and their consensus was used for analysis. The above relational narratives were analyzed, giving a final sample size of 83, 49 women and 34 men, providing statistical power of .95 to detect medium-sized effects (r_{es} = .34) at $p < .05$ one-tailed. For the gender comparisons of associations, the subgroup sizes could only detect very large differences, $(r_1 - r_2)_{es}$ = .84 at the same power and $p < .05$ two-tailed. Excluded narratives focused on Academic Challenges, Illness/Injury of self, Nonrelational Losses (e.g., property, money, pets, opportunities), and unclassifiable events. Again, pre-consensus interrater reliability was satisfactory, Pearson's r = .92 for number of interactions,

for average Decentering level Spearman's *rho* = .69. Post-discussion consensus scores, which correlated *rho* = .81 with each scorer's scores, were used for analysis.

Additional measures available in this data set included a five-item rating scale for Event Closure (alpha = .80) designed to measure the extent to which an individual has achieved psychological closure concerning an event (e.g. "I have put the event completely behind me"), and the 28-item Autobiographical Memory Questionnaire (AMQ). The AMQ gathers global ratings of the event without the specificity to internalization of the other's experience available for Study 1, but the single item, "The emotions that I feel are extremely intense" captured the range of both positive and negative emotions elicited in Study 2 writing by the more extreme events described. Another item, "While remembering the event, I feel that I travel back to the time when it happened", appeared to capture a different aspect of active processing, the emotional immediacy of reliving (without the implication of repetition), but phrased in unemotional terms that might reduce men's theoretical reluctance to endorse a feminine-sounding item (Range & Jenkins, 2010).

All participants were asked to nominate "a very stressful event" from their lives. As described in Boals et al. (2011), half of the participants were given standard EW instructions, and the other half were asked to simply describe the event. After completing the narrative, participants answered questions about their nominated negative event, including the AMQ and the Closure Scale. Finally, participants were thanked and debriefed as to the purpose of the study.

Hypotheses

The first three hypotheses for Study 1 were tested again (Hypotheses 2.1-2.3) similarly comparing genders. A new hypothesis related Decentering to active processing via participants' self-ratings on the AMQ of the memory's emotional intensity and immediacy. The closure ratings were used to identify low-closure memories (n = 42), and the general hypothesis that high Decentering captures active processing of relational information was tested by rerunning analyses for those hypotheses for low closure memories only (defined as ratings below the median score of 21). Support for this hypothesis would consist of stronger associations of Decentering in support of the previous hypotheses in this subsample than in the high closure sample. Thus, new hypotheses were:

2.4. Decentering is positively correlated with self-rated AMQ emotional intensity and immediacy of a stressful relational memory.

2.5 Associations of Decentering with the variables in Hypotheses 2.1-2.4 are higher for low-closure participants than for high-closure participants. Given the exploratory nature of this hypothesis and the low power provided by the sample sizes, it was tested globally by a count of the number of tests differing in the expected direction rather than by significance tests of individual comparisons.

Study 2 Results

Descriptive Analyses. Gender and closure group were not significantly related. There was no significant relationship for number of interactions with average Decentering level, so no correction for response fluency was needed (Smith, Feld, & Franz, 1992).

The descriptive statistics in Table 3 identified significant gender differences in means for total word count, number of interactions, and average Decentering scores. The results presented below did not differ as a function of writing condition.

Tests of Hypotheses

2.1. Decentering was again positively correlated with cognitive word use, especially insight words (Table 4), both at medium effect size (a large effect size for the low closure group), supporting the hypothesis. Neither association differed significantly by gender. Decentering was not related to causal words overall or in any subgroup.

2.2. Decentering was positively correlated with positive emotion word use overall and for all subgroups at a medium to large effect size, supporting the hypothesis.

2.3. Decentering was not significantly correlated with negative emotion words overall or in any subgroup.

2.4 Decentering was marginally positively correlated with self-rated AMQ emotional intensity, but not immediacy, of a stressful relational memory (Table 4) at a small effect size for the overall sample, which did not support the hypothesis.

2.5. Associations with Decentering in Hypotheses 2.1-2.4 were higher for low-closure participants than for high-closure participants for five of the seven comparisons: cognitive and insight words, self-rated intensity and immediacy ratings, and positive emotion words. Thus, the hypothesis was supported. The largest between-group difference, that for insight words, was not significant, Fisher $z = 1.60$, $p < .11$ for the difference of .29, for which these sample sizes provided one-

tailed power of only .35; only very large differences, $(r_1 - r_2)_{es} = .75$, between high and low-closure groups could be detected with power of .95 and $p < .05$ one-tailed .

Study 2 Discussion

Study 2 replicated the associations of Decentering with cognitive word use, including insight words, and positive emotion words. It did not support the original Hypothesis 1.3 regarding a negative correlation with negative emotion words in this sample involving a more heterogeneous group of relational stressors, many more severe than the romantic relationship breakups in Study 1. For gender differences, the pattern of similar gender findings for cognitive, insight, and emotion words paralleled Study 1. The hypotheses about Decentering as active processing of relational information were supported for the low-closure group's self-ratings of intensity and marginally for immediacy. High- and low-closure participants' associations of Decentering with other variables differed in the hypothesized direction for five of seven measures, but only one difference even approached marginal significance, given the low power of the difference tests.

General Discussion

The results of these studies show the possible relevance of decentering processes as a potential explanation of previous atheoretical findings linking word counts in EW narratives to benefits from the writing process, at least where negative interpersonal events are concerned. Boals and Klein (2005) asserted that more use of cognitive words shows individuals organizing their thoughts about the experience, so we hypothesized that for relational stressors, cognitive word use

would relate to higher levels of Decentering as an especially functional way of organizing relational thoughts toward the goal of understanding the other person and the relationship. This hypothesis was supported at a medium or larger effect size in both studies of interpersonal stressors, one focused on romantic relationship breakups and the other on more heterogeneous relational stressors, some quite serious (death, abuse, divorce). Many cognitive words, especially insight words, describe internalizing processes. When another person is internalized, the interaction is scored at higher levels of Decentering, and more than half the range of the Decentering score details increasingly complex forms of internalization. Using more mature and complex internalization in expressing a relational memory apparently produces more cognitive and insight-related words, which provides a plausible theoretical explanation for previous findings linking cognitive words to EW benefits. Given that interpersonal stressors are frequent in young adults, role-taking has functional utility for relational processes such as negotiation and reduction of interpersonal conflict (Elfers, Martin, & Sokol, 2008; Enright & Lapsley, 1980). This might include relieving stress and producing benefits in EW. If supported by future research, such a theoretical grounding might facilitate use of EW as both an assessment technique and a therapeutic tool for relational stressors.

The finding that Decentering was related to positive emotion words in both studies supports the theoretical prediction that more mature perspective-taking should yield more positive experiences in relationships, or at least better recall of positive feelings despite the stressful circumstances. Theoretically, individuals who

decenter at higher levels should have more successful relationships than others do, especially if they find their partner's happiness an emotionally intense experience. Thus, their use of more positive emotion words even when writing about a stressful event could indicate more positive experiences in and memories of the relationship.

Significant association of Decentering with negative emotion words was specific to men in Study 1, and to the pre-breakup portion of the relationship process. This, and the Study 1 finding relating pre-breakup Decentering to positive emotions among women and not men, indicates the importance of process-related approaches to EW, as recommended by Bornstein (2010). The gender differences in these associations are consistent with gender social role theory's description of cultural dictates prohibiting women's expression of negative emotions in relational contexts while encouraging their positive emotion expression, but permitting negative emotions in such contexts for men (Range & Jenkins, 2010).

Although the word counts included words outside of scoreable interaction units that would be unrelated to Decentering level, some part of these findings might be due to the differing ways that positive and negative words are used in interaction contexts. In Decentering scoring, negative emotion words about relationships are often nonreflective and if so, are scored as a directed action (broadly defined) instead of internalization, such as "I hated him" (2). In contrast, positive interpersonal emotion words are more often used in contexts that denote closeness via internalization, such as "I enjoyed being with him", scored 9 because it requires a capacity to reflect on her own experience in relation to him. In these

cases, positive emotions are structured into more mature social cognitive expressions. However, this is not invariant; "We enjoyed being together" scores 1 for lack of differentiation, and "I loved him" scores 2; "I decided I couldn't stop resenting her doing that" scores 9. Furthermore, because the word counts included words outside of scoreable interaction units ("I loved the house and he hated it" is unscoreable), these findings are unlikely to be due solely to such scoring artifacts.

Theoretically, Interpersonal Decentering is a social-cognitive ability developed along with conservation of the physical properties of objects, such as the integration of height and width into the concepts of area and volume. Like conservation, it requires a capacity for simultaneous information processing. Theoretically, most adults acquire the capacity for perspective-taking, but might not always use it. Decentering in EW about stressful relational events represents the individual's disposition to mobilize this mature ability spontaneously in reflecting on "deepest thoughts and feelings about the relationship." Perhaps those who are disposed to mobilize decentering processes in considering stressful relational events might be more willing and able to recall and disclose their "deepest thoughts and feelings", and for them the latter are more often positive. Future research in this line should ask writers to reflect on the emotionality of the writing process itself.

The disposition to decenter maturely is likely in turn to be affected by a variety of relationship characteristics not measured in these studies (but advisable for future research), such as the ways in which the relationship is important to the person (both short and long-term), a cost-benefit analysis of the person's investment

in keeping the relationship, and the ways in which the person acts on that investment. Study 1 showed that high decenterers might be more emotionally invested in their partner's happiness, especially if they are men; Study 2 found they recalled their memories with slightly more emotional intensity (whether positive or negative), further linking social cognitive to emotional processing in relational contexts using data independent of the narratives scored for Decentering.

Previous findings of gender differences in Decentering have been in response productivity (story length, number of interactions) and not in average Decentering level, as in Study 2. Gender differences in correlates of Decentering have been few, and likely due to marker variable effects or to theoretically interpretable differences in gender schemas, gendered social roles, and/or gender socialization (e.g., Dobbs, Leeper, & Jenkins, 2004). Thus, there might be gender differences in the situational cues by which decentering processes are mobilized and toward what ends rather than in the ability itself. Women may take responsibility for their relationships by problem-solving when tensions arise (Range & Jenkins, 2010), attempting to understand the psychological causes of others' actions (scored 7 or 8) and of their own responses and actions toward others (scored 9). Stickney (2010) discussed the relevance for EW of women's tendency to ruminate, consistent with this finding. In Study 1, women who rated themselves lower on recovery more often reported that their partner initiated the breakup, and some of these same women also tended to decenter at higher levels, perhaps representing ruminative reprocessing.

The order of measure administration might have affected the findings; Study 1 participants rated the characteristics of the relationship and breakup and their emotional intensities before doing the EW. Thus, the appraisal processes used in creating their ratings may have primed certain memory processes that were then reflected in the writing, including higher levels of Decentering (representing more mature processing of cognitions and emotions) or lower levels (less mature processing, and perhaps defensive processes such as psychological distancing via simplification and depersonalization). In Study 2, however, participants rated their experience of the writing process after doing the writing, so the Decentering scores were thus not influenced by priming. Although priming effects may have influenced some individuals differentially, they do not explain the present findings.

Strengths of these studies, typical of secondary analyses, include freedom from a priori biases such as experimenter expectations. A corresponding limitation is the inability to answer questions requiring data not gathered in the original study. The word-count approach to text analysis is a limitation for this and other studies due to loss of context and meaning. Such analyses do not indicate the subject or object of the thoughts or feelings captured, and cannot distinguish words or phrases that are preceded by negation or may be abstract figures of speech.

Future research should examine changes in level of Decentering over repeated EW sessions in relation to recovery from more serious interpersonal traumas, comparing Decentering and cognitive/insight word counts as predictors of benefits in a full experimental design. As recommended by Range and Jenkins

(2010), EW research designs should include at minimum gender comparisons of both means and associations; also useful are measures of functionally related gender constructs such as emotional expression. Future studies of relational stressors should gather further details about the relationships: social roles of the people involved, associated gender role expectations, length and initiation of the relationship, relative investment of each partner in the relationship, and positive emotional characteristics of the relationship such as mutuality (Genero, Miller, Surrey, & Baldwin, 1992) and relational health (Liang, Tracy, Taylor, Williams, Jordan, & Miller, 2002).

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Table 1. *Descriptive Analysis (Study 1)*

	Men		Women	
	M	SD	M	SD
	n = 52		*n* = 50	
Word count	226.96	167.73	273.56	199.55
Number of interactions	8.02	4.98	8.86	4.95
Average Decentering level	3.06	1.74	3.19	1.33
Pre breakup Decentering	3.06	1.99	2.79	1.83
Post breakup Decentering	3.63	2.30	3.11	2.12
Post breakup Decentering increase	.64	2.73	.07	1.98
% Cognitive words	8.16	2.58	7.83	1.98
% Positive emotion words	3.31	2.23	2.96	1.48
% Negative emotion words	1.68	1.47	1.87	1.37

Note: *N* =102. No gender differences were significant by two-tailed t-tests.

Table 2. *Correlations of Average Decentering with Breakup Characteristics and Word Proportions (Study 1)*

	All	Men	Women
Overall Decentering	N = 102	n = 52	n = 50
Recovery from breakup [a]	-.14	-.01	-.31*
Emotional intensity rating: Happy [b]	.17+	.25+	.09
% Cognitive words	.40***	.35**	.48***
% Insight words	.32**	.35**	.29*
% Causal words	.13	-.01	.28*
% Positive emotion words	.31**	.36**	.23
% Negative emotion words	.04	.08	-.02
Pre-breakup Decentering only			
Partner initiated breakup [c]	.06	-.16	.31*
% Positive emotion words	.16	-.01	.44***
% Negative emotion words	.22*	.38**	.02

+ $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$. [a] Coded 1= "Not at all" to 5= "Completely recovered". [b] Rated emotional intensity of "Wanting to make X happy"; coded 1=No emotion to 4=Extreme emotion. [c] Coded 1="I initiated the breakup" to 5="My partner initiated the breakup".

Table 3. *Descriptive Analyses (Study 2)*

	Men	Women	
	M (SD)	M (SD)	Two-tailed *t*
	n = 34	*n* = 49	
Word count	259.2 (128.3)	417.3 (165.2)	4.68***
Number of interactions	5.62 (4.4)	9.91 (5.8)	3.66***
Average Decentering	3.41 (1.7)	4.18 (1.2)	2.27*
% Cognitive words	7.76 (2.1)	7.93 (2.4)	0.34
% Insight words	2.55 (1.4)	2.62 (1.1)	0.28
% Causal words	1.24 (1.0)	1.28 (0.6)	0.26
% Positive emotion words	1.76 (0.9)	2.19 (1.2)	1.78
% Negative emotion words	2.88 (1.3)	2.82 (1.3)	0.20

Note: *N* =83.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 4. *Correlations of Average Decentering with Relational Writing Experience and Word Proportions (Study 2)*

	All	Low Closure	High Closure	Men	Women
	$N = 83$	$n = 41$	$n = 42$	$n = 34$	$n = 49$
Emotional intensity rating [a]	.18+	.31*	.08	.19	.18
Back at that time [b]	.16	.28+	.05	.26	.06
% Cognitive words	.37***	.49***	.26+	.23	.52***
% Insight words	.41***	.58***[c]	.29+[c]	.42**	.41**
% Causal words	-.04	.01	-.10	-.14	.10
% Positive emotion words	.43***	.49***	.38**	.34*	.49***
% Negative emotion words	-.09	-.08	-.10	-.03	-.15

+ $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$. [a] Coded 1 = not at all, 7 = extremely.

[b] Coded 1 = not at all, 7 = completely. [c] Fisher $z = 1.60$, $p < .11$.

Bios

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