From a Distance: Implications of Spontaneous Self-Distancing for Adaptive Self-Reflection

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Although recent experimental work indicates that self-distancing facilitates adaptive self-reflection, it remains unclear (a) whether spontaneous self-distancing leads to similar adaptive outcomes, (b) how spontaneous self-distancing relates to avoidance, and (c) how this strategy impacts interpersonal behavior. Three studies examined these issues demonstrating that the more participants spontaneously self-distanced while reflecting on negative memories, the less emotional (Studies 1–3) and cardiovascular (Study 2) reactivity they displayed in the short term. Spontaneous self-distancing was also associated with lower emotional reactivity and intrusive ideation over time (Study 1). The negative association between spontaneous self-distancing and emotional reactivity was mediated by how participants construed their experience (i.e., less recounting relative to reconstruing) rather than avoidance (Studies 1–2). In addition, spontaneous self-distancing was associated with more problem-solving behavior and less reciprocation of negativity during conflicts among couples in ongoing relationships (Study 3). Although spontaneous self-distancing was empirically related to trait rumination, it explained unique variance in predicting key outcomes.

Keywords: psychological distance, self-distancing, rumination, avoidance, conflict behavior

Human beings are motivated to analyze and understand their emotions and behavior (e.g., Heider, 1958; Jones & Davis, 1965; Kelly, 1955). This motivation to "ask why" is particularly strong when people experience distress because many people tacitly assume that understanding their emotions will improve them (e.g., Papageorgiou & Wells, 2001; Wilson & Gilbert, 2008). However, decades of research examining the benefits of "asking why" have produced contradictory findings. On the one hand, there is theory and research indicating that understanding one's reactions to negative experiences facilitates adaptive coping and leads to a host of mental and physical health benefits (e.g., Carver & Scheier, 1998; Martin & Tesser, 1996; Pennebaker & Graybeal, 2001; Smyth, 1998; Wilson & Gilbert, 2008). On the other hand, there is an equally compelling body of work showing that people's attempts to analyze their feelings often lead to rumination—a process in which people repeatedly focus on what they feel and why they feel a certain way, which exacerbates and maintains negative affect rather than reducing it (e.g., Mor & Winquist, 2002; Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008; J. M. Smith & Alloy, 2009).

Recently, research has begun to investigate the psychological processes that determine why people's attempts to understand their negative feelings at times succeed and at other times fail (e.g., Joormann, Dkane, & Gotlib, 2006; Trapnell & Campbell, 1999; Treynor, Gonzalez, & Nolen-Hoeksema, 2003). One program of research that has addressed this issue posits that *psychological distance* plays a key role in distinguishing between adaptive versus maladaptive forms of self-reflection (see Kross, 2009, for review). Specifically, laboratory experiments indicate that directing people to analyze their feelings surrounding negative autobiographical experiences from a self-distanced perspective (i.e., thinking about oneself from the perspective of a "fly on the wall"), in comparison to a self-immersed perspective (first-person perspective), leads them to experience less emotional and physiological reactivity in the short term, while buffering them against negative outcomes associated with rumination over time (Ayduk & Kross, 2008; Kross & Ayduk, 2008; Kross, Ayduk, & Mischel, 2005).

Although these findings provide initial evidence suggesting that analyzing negative experiences from a self-distanced perspective

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Özlem Ayduk and Ethan Kross contributed to the preparation of this article equally; authorship was determined by alphabetical order. Parts of this research were supported by a grant from the National Institute of Mental Health (MH069703). We would like to thank Peter Clasen, Phil Enock, Anett Gyurak, Anna Luerssen, Sam Nordberg, and Anna Weinberg for their help in data collection, coding, and scoring. We would like to thank Serena Chen, Sheri Johnson, and Rodolfo Mendoza-Denton for their helpful comments on earlier versions of the article.

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Journal of Personality and Social Psychology, 2010, Vol. 98, No. 5, 809–829
 0022-3514/10/$12.00 DOI: 10.1037/a0019205

facilitates adaptive self-reflection, three key issues remain unanswered. First, to increase the generalizability of previous findings, the role of self-distancing in facilitating adaptive self-reflection needs to be empirically demonstrated outside of the laboratory—that is, when it is *spontaneously* implemented as a cognitive regulatory strategy. Second, it has been argued that self-distancing serves an avoidance function and should predict poor recovery from negative experiences over time. Therefore, the relationship between spontaneous self-distancing and avoidance needs to be examined, and the consequences of self-distancing for functioning need to be assessed over time. Finally, to gauge the adaptive function of spontaneous self-distancing across a variety of outcomes that have real-life significance, our current knowledge base on its consequences for intrapersonal outcomes (e.g., negative affect, rumination) needs to be expanded to its consequences for interpersonal behavior and outcomes. The current research addresses each of these issues.

Psychological Distance, Coping, and Self-Control

Psychological distancing refers to a process in which peoples' direct egocentric experience of a stimulus in the here and now is diminished (e.g., Cocking & Renninger, 1993; Liberman & Trope, 2008; Mischel & Rodriguez, 1993). Research across various areas suggests the importance of this construct for self-control and adaptive coping. In social psychology, for example, more than three decades of research on delay of gratification has shown that children's use of psychological distancing strategies directly influences their ability to forgo immediate gratification for the sake of long-term goals (e.g., see Mischel & Ayduk, 2004, for review). By enabling children to cognitively represent affect-arousing experiences more abstractly and less concretely (e.g., thinking of marshmallows as white puffy clouds, instead of as yummy and chewy), distancing strategies have been shown to facilitate adaptive self-control (see Mischel & Rodriguez, 1993, on the relationship between psychological distance and delay of gratification). Consistent with these early findings, more recent work indicates that enhancing psychological distance—either by manipulating temporal (near vs. far future), spatial (close vs. far distances), or social (self vs. other) distance—leads to higher level, "big picture" representations of events that aid attainment of long-term goals (Fujita, Trope, Liberman, & Levin-Sagi, 2006; see Liberman & Trope, 2008, for review) and facilitates positive changes in construals of the self (Libby, Eibach, & Gilovich, 2005).

The construct of psychological distance also figures prominently in clinical research, theory, and practice. For example, Alford and Beck (1998, p. 142) wrote, "'Distancing' refers to the ability to view one's own thoughts (or beliefs) as constructions of 'reality' rather than as reality itself," and they identified this process as an important precondition for enabling effective cognitive therapy. Likewise, many "third-wave" forms of cognitive behavioral therapy (e.g., mindfulness-based cognitive therapy, acceptance and commitment therapy, and dialectical behavior therapy) focus on the concept of *decentering* as a prerequisite for therapeutic change. This concept overlaps conceptually with psychological distancing in that clients are taught to step back from their thoughts and feelings and observe them (e.g., Fresco, Segal, Buis, & Kennedy, 2007; Hayes, Strosahl, & Wilson, 1999; Linehan, 1993; Segal, Williams, & Teasdale, 2002; Teasdale et al., 2002).

Self-Distancing as an Enabling Condition for Adaptive Self-Reflection

Drawing from these literatures, in prior work (Ayduk & Kross, 2008; Kross & Ayduk, 2008; Kross et al., 2005) we suggested that attempts to analyze emotions surrounding past negative experiences would lead to maladaptive rumination when psychological distance from the self is low (which we refer to as *self-immersion*) but to adaptive self-reflection when psychological distance from the self is high (which we refer to as *self-distancing*). We further reasoned that one way of leading people to distance from the self is to manipulate the type of self-perspective they adopt when they focus on understanding their feelings. Specifically, prior research indicates that people can recall autobiographical experiences from either a *self-immersed* perspective, in which they visualize events happening to them through their own eyes, or a *self-distanced* perspective, in which they see themselves in their experience from the perspective of an observer or "fly on the wall" (e.g., Nigro & Neisser, 1983; Robinson & Swanson, 1993). Drawing from this distinction, we hypothesized that adopting and maintaining a self-distanced perspective while people reflect on their emotions should allow them to reconstrue their feelings and the meaning of their experience rather than concretely rehash what happened and what they felt.

Supporting this hypothesis, we found in a series of experiments that self-distanced (as opposed to self-immersed) analysis of emotions surrounding negative autobiographical experiences (both anger and sadness related) leads people to focus relatively less on *recounting* the emotionally evocative details of their experience (i.e., what happened) and relatively more on *reconstruing* it in ways that promote insight and closure. This shift in the content of peoples' thoughts about their past experiences (less recounting relative to reconstruing), in turn, leads to lower levels of emotional reactivity in the short term (Kross & Ayduk, 2008; Kross et al., 2005). Furthermore, experimentally manipulated self-distancing buffers against negative outcomes over time, including prolonged physiological reactivity, rumination, and maintenance of emotional reactivity (Ayduk & Kross, 2008; Kross & Ayduk, 2008).

Three Gaps in Current Knowledge

Although these findings highlight the role that that self-distancing plays in enabling people to reflect on self-relevant negative experiences adaptively, they nevertheless leave three issues unaddressed. First, does engaging in self-reflection from a self-distanced perspective substantively impact coping in everyday life? Because experiments are run under controlled conditions to eliminate the influence of extraneous variables, they can overestimate effect sizes and have low generalizability to what happens in real life (for similar arguments, see Cronbach, 1957; Gross, 1998; Taylor & Brown, 1988). Therefore, to establish the robustness and the generalizability of previous experimental findings, the role of self-distancing in facilitating adaptive self-reflection needs to be empirically examined when this process is spontaneously activated in everyday life.

Second, does spontaneous self-distancing facilitate avoidance? The aforementioned experimental findings on self-distancing contradict an alternative body of research, mostly in the clinical domain, which argues that psychological distancing strategies blunt negative affect in the short term because they lead people to avoid focusing on the emotional content of their feelings, leaving people vulnerable to distress over time (e.g., Foa, Huppert, & Cahill, 2006; Foa & Kozak, 1986; McIsaac & Eich, 2002, 2004; Williams & Moulds, 2007). This argument has not been directly addressed in past research on self-distancing. As such, it is necessary to (a) examine how spontaneous self-distancing relates to avoidance, pitting avoidance against thought content (i.e., recounting vs. reconstruing) as an explanatory mechanism for its emotion down-regulatory effects, and (b) examine the implications of spontaneous self-distancing for affect and functioning over time.

Finally, what are the interpersonal consequences of self-distancing? Previous research has focused solely on the intrapersonal consequences of analyzing negative feelings from a self-distanced versus self-immersed perspective. There is reason to believe, however, that self-distancing should have interpersonal consequences as well. For example, trait rumination has been linked with impairments in interpersonal problem-solving behavior (Lyubomirsky & Nolen-Hoeksema, 1995), as well as aggression and hostility (Bushman, 2002). Therefore, in order to fully understand how self-distanced reflection impacts emotion regulation, its consequences for interpersonal conflict and problem solving need to be addressed.

Overview of the Current Research

We performed three studies to address the issues outlined above. All three studies focused on self-distancing as a spontaneously implemented strategy (rather than an experimentally manipulated one) in order to examine how this process impacts people in everyday life. Nevertheless each study had a different, complementary focus. Study 1 examined the implications of spontaneous self-distancing for emotional reactivity and avoidance with respect to interpersonal rejection experiences both cross-sectionally and longitudinally (over a 7-week period). Study 2 aimed to replicate key findings from Study 1 with respect to autobiographical anger experiences and to extend them by examining how spontaneous self-distancing influences physiological markers of distress over time. Finally, Study 3 explored the adaptive function of spontaneous self-distancing for interpersonal behavior using daily diary and lab-based interaction tasks, focusing on expressions and reciprocation of hostility, as well as on constructive problem-solving behavior during partner conflicts in ongoing relationships. In addition, in each study a theoretically relevant individual difference variable (e.g., trait rumination, trait reappraisal, suppression) was examined and its effect statistically controlled to examine the unique predictive utility of spontaneous self-distancing.

Study 1

Study 1 was a longitudinal study in which participants were led to reflect on their emotions surrounding a past interpersonal rejection experience in an initial session (Time 1) during which spontaneous self-distancing, emotional reactivity, avoidance, and thought content measures were collected. Participants then came back to the lab approximately 7 weeks later (Time 2) and were reminded of the same experience again to assess how initial levels of spontaneous self-distancing predicted a number of key outcomes.

Study 1 focused on addressing the first two goals of the current research: (a) the implications of self-distanced reflection for emotional reactivity when self-distancing is spontaneously used and (b) the relationship between spontaneous self-distancing and avoidance. Towards the first goal, we examined whether spontaneous self-distancing is cross-sectionally associated with reduced emotional reactivity and whether this relationship is mediated by thought content (i.e., less recounting, more reconstrual).

Additionally we addressed the issue of whether self-distancing serves a maladaptive avoidance function in three ways: First, we pitted the role of thought content against a tendency to avoid negative emotions during self-reflection as a mediator of the cross-sectional associations between spontaneous self-distancing and emotional reactivity. Second, adaptive self-reflection is thought to involve altering the representation of a negative memory to reduce its aversiveness in such a way that the individual reacts less strongly when that memory becomes reactivated in future occasions (Foa & Kozak, 1986; Rachman, 1980). Therefore, we examined the relationship of spontaneous self-distancing to emotional reactivity to the same eliciting experience over time, using longitudinal data. Third, recurrent, intrusive ideation is a defining feature of rumination (Watkins, 2008), and recent evidence indicates that people who try to avoid their emotions are at greater risk for rumination (Cribb, Moulds, & Carter, 2006; Moulds, Kandris, Starr, & Wong, 2007). Therefore, we assessed how spontaneous self-distancing is prospectively related to intrusive ideation about and cognitive avoidance of the experience recalled at Time 1 during the 1-month period preceding the Time 2 follow-up assessment.

Study 1 examined two additional issues. First, our theoretical model and prior experimental findings suggest that self-distancing reduces emotional reactivity rather than the other way around (lower emotional reactivity enabling greater self-distancing). The longitudinal nature of Study 1 allowed us to test the direction of the link by examining whether people who show greater emotional reactivity initially engage in lower levels of self-distanced analysis over time (i.e., during the Time 2 Session). Second, Study 1 aimed to explore the relationship between spontaneous self-distancing and trait rumination. Because experimentally manipulated self-distancing has been shown to lead to lower levels of rumination in prior research (Kross & Ayduk, 2008), we expected spontaneous self-distancing and trait rumination to correlate negatively with one another. In addition, we explored if spontaneous self-distancing served as a unique predictor of key outcomes above and beyond trait rumination.

Sample and Procedure

Participants were 56 University of California, Berkeley undergraduates (41 women, 15 men; M_{age} = 20.11 years, SD_{age} = 2.04) who completed both sessions of a two-session study. The racial breakdown of the sample was 1.79% African American, 57.14% Asian American, 23.21% Caucasian, 10.71% Hispanic, and 5.36% other, with 1.79% declining to state.

Initially, 264 participants completed Session 1 as part of a mass prescreening session for students taking psychology courses at the

University of California, Berkeley at the beginning of a semester (Time 1 assessment). Because the number of questions each investigator participating in the mass testing session could ask was limited, we included a brief spontaneous self-distancing task. In this task, participants were prompted to (a) recall a recent negative interpersonal experience, (b) reflect on their deepest thoughts and feelings surrounding it, and (c) answer a series of self-report questions about their experience. Upon completion, participants received one course credit.

Because our effect sizes tend to be in the moderate range (Ayduk & Kross, 2009), we determined that a sample size of 50–60 participants for Session 2 would be adequate to provide sufficient statistical power (Cohen, 1992). Therefore, 5–6 weeks after the initial assessment we randomly invited participants who had completed the initial session (Time 1) to participate in a subsequent testing session (Time 2) until we reached our target sample size. During the second session, participants first completed measures of baseline negative affect and trait rumination. Subsequently, they performed the spontaneous self-distancing task again with respect to the same negative experience they had thought about during Time 1. This task was followed by the administration of additional questionnaires to assess avoidance and intrusive ideation about the recalled experience (described below). Participants were either given one course credit or paid $10 for their participation in the follow-up.

The sample that completed both assessments and hence is the focus of the current study did not differ significantly from the larger sample that completed only the Time 1 assessment on self-distancing ($F < 1$), age ($F = 1.72$, $p > .19$), gender, $\chi^2(1) = 3.03$, $p > .08$, or race, $\chi^2(5) = 8.96$, $p > .11$.

The mean time lag between the two assessments was 48.11 days or 6.87 weeks ($SD = 9.45$ days). In preliminary analyses, this variable did not change or moderate the results reported below. Therefore it is not discussed further.

Materials and Measures: Time 1

Memory prompt and reflection instructions. Participants were asked to recall a negative interpersonal experience with the following recall prompt:

> Think of a recent time when you felt rejected by someone who meant a lot to you. Perhaps you were looking to them for affection, for recognition, or for understanding or sympathy. This person turned away and cast you off as if they didn't value you at all. Please try to recall one event specifically that is relatively recent and unresolved and still highly upsetting to you. Take your time as you try to do this. Once such an event comes to your mind, allow yourself to ponder this event, letting your deepest thoughts and feelings run through your mind for a few moments.

Spontaneous self-distancing. Subsequently participants were asked to indicate the extent to which they saw the event replay through their own eyes versus watched the event unfold as an observer as they pondered their deepest thoughts and feelings regarding the experience (1 = *predominantly immersed participant*, 4 = *both, more or less equally*, 7 = *predominantly distanced observer*). The mean self-distancing rating was 3.42 ($SD = 1.82$), indicating that people thought about their experience more from a self-immersed than a self-distanced perspective, which is consistent with prior research (Nigro & Neisser, 1983).

Emotional reactivity. Participants rated their current emotions on the following two items: "I reexperience the emotions I originally felt during the conflict when I think about it now" and "As I think about the event now, my emotions and physical reactions to the conflict are still pretty intense" (1 = *strongly disagree*, 4 = *neutral*, 7 = *strongly agree*). Ratings on these items were averaged to index emotional reactivity ($\alpha = .89$; $M = 4.17$, $SD = 1.65$).

Thought content. To assess thought content, we created closed-ended questions that conceptually mapped onto the two types of thoughts that are of theoretical interest and have been coded in prior research (Kross & Ayduk, 2008; Kross et al., 2005): *recounting* (i.e., focusing on the specific chain of events that took place) versus *reconstruing* (i.e., expressing subjective perceptions of insight and closure, and realizations that made participants think and feel differently about their experience). Participants rated their agreement (1 = *strongly disagree*, 4 = *neutral*, 7 = *strongly agree*) with the statement "My thoughts focused on the specific chain of events—sequence of events, what happened, what was said and done—as I thought about the experience in this study" to operationalize recounting ($M = 4.29$, $SD = 1.85$). Participants' agreement ratings with the following three items were averaged to operationalize reconstruing ($\alpha = .84$; $M = 3.03$, $SD = 1.28$): "As I thought about my experience during the study I had a realization that caused me to think differently about the experience," "As I thought about my experience during the study I had a realization that made me experience a sense of closure," and "Thinking about my experience during the experiment led me to have a clearer and more coherent understanding of this experience."

Avoidance. Participants' agreement ratings (1 = *strongly disagree*, 7 = *strongly agree*) with the following two statements were averaged to index their level of avoidance: "When prompted to recall this experience, I tried to avoid thinking about it" and "When prompted to recall this experience, I tried to suppress (push away) my feelings about it" ($\alpha = .79$; $M = 3.66$, $SD = 1.44$).

Covariates. Because memories of events that are perceived as being more resolved and older in age may elicit lower emotional reactivity and greater self-distancing (Nigro & Neisser, 1983; Robinson & Swanson, 1993), we assessed these variables and included them as covariates. Participants indicated how long ago the event took place (0 = *less than a month ago*, 1 = *approximately 6 months ago*, 2 = *approximately a year ago*, 3 = *2–3 years ago*, 4 = *4 or more years ago*; $M = 1.38$, $SD = 1.31$) and the extent to which the event was perceived to be resolved (1 = *unresolved, active source of distress*, 7 = *resolved*; $M = 3.68$, $SD = 1.79$).

Materials and Measures: Time 2

The number of questions we could assess at Time 1 was limited by the mass testing session. In contrast, the Time 2 assessment was completed in the lab and therefore included a wider range of questionnaires to assess multiple constructs and to increase both reliability and validity.

Baseline negative affect. We wanted to rule out the possibility that people who engaged in greater self-distancing at Time 1 reported lower emotional reactivity at Time 2 after reflecting on their memory because they started the second session with less negative affect. Thus, at the beginning of Session 2, participants

completed the Negative Affect subscale of the Positive and Negative Affect Scale (PANAS; Watson, Clark, & Tellegen, 1988; $\alpha = .82$) using a 5-point scale (1 = *not at all*, 5 = *extremely*). To be consistent with other affect variables, ratings were rescaled to a 1–7 scale ($M = 1.97$, $SD = 0.62$). This variable was included as a covariate in all Time 2 analyses.

Trait rumination. Before completing the self-distancing questionnaire, participants completed the brooding subscale of the Ruminative Responses subscale (RRS—Revised; Treynor et al., 2003), which measures individual differences in ruminative ideation. This subscale includes five items (e.g., Think "what am I doing to deserve this"), and participants rated the frequency with which they typically engage in each item when they feel depressed on a 1 (*almost never*) to 4 (*almost always*) scale ($\alpha = .72$; $M = 2.22$, $SD = 0.74$).

Memory prompt. At Time 1, participants were asked to write down a cue phrase that would allow them to remember the specific experience they had just recalled during a future testing session. At Time 2, following the baseline affect assessment, participants were presented with their idiosyncratic cue and then asked to recall the same experience again and ponder their current deepest thoughts and feelings surrounding their experience.

Spontaneous self-distancing. Participants indicated their level of self-distancing after they reflected on their experience using the same item from Time 1 ($M = 3.75$, $SD = 2.01$). The 7-week test–retest reliability in self-distancing was $r(55) = .47$, $p = .0003$.

Emotional reactivity. Participants' ratings on the same two items used to measure emotional reactivity at Time 1 were averaged to index Time 2 emotional reactivity ($\alpha = .81$; $M = 4.10$, $SD = 1.78$). At Time 2, participants also rated their current emotions (1 = *not at all*, 5 = *extremely*) on the Negative Affect subscale of the PANAS to provide an additional measure of negative affect ($\alpha = .86$). Again, these ratings were transformed to a 1–7 scale ($M = 2.33$, $SD = 0.91$). Emotional reactivity and PANAS scores were correlated, $r(55) = .56$, $p = .0001$, and in preliminary analysis yielded highly similar results. Therefore, for parsimony, we averaged them into a composite index of negative emotional reactivity ($M = 3.22$, $SD = 1.20$).

Perceived resolution. Because we were interested in whether Time 1 self-distancing predicted perceived resolution over time, this variable was treated as a dependent variable at Time 2 rather than as a covariate. It was measured with the same item used at Time 1 ($M = 4.42$, $SD = 1.67$).

Intrusions and avoidance. The Impact of Event Scale (IES; Horowitz, Wilner, & Alvarez, 1979) was used to assess the degree to which participants experienced intrusive ideation and engaged in avoidance behavior during the month prior to the second laboratory session. The IES is a short self-report measure that is widely used to assess the psychological impact of negative experiences and consists of two subscales. The Intrusions subscale (seven items) assesses the degree to which individuals experience unwanted thoughts, images, and dreams about an eliciting event as well as waves of intense emotional reactions (e.g., "I thought about it when I didn't mean to" and "I had waves of strong feelings about it"). The Avoidance subscale (eight items) assesses the degree to which individuals try to deny the meaning of the event, engage in suppression and behavioral inhibition, and experience blunted emotional reactions or numbness (e.g., "I avoided letting myself get upset when I thought about it or was reminded of it" and "I tried to remove it from memory"). Both subscales correlate with a variety of stress reactions, including posttraumatic stress disorder (PTSD) symptoms, depression, anxiety, somatic symptoms, and hypothalamic–pituitary–adrenal axis reactivity (Sundin & Horowitz, 2002). In the present sample, participants were asked to indicate how often during the past month they had experienced each symptom (1 = *not at all*, 2 = *rarely*, 3 = *sometimes*, 4 = *often*). One participant did not answer this questionnaire. In the remaining sample, the mean scores were 1.29 on the Intrusions subscale ($SD = 0.83$; $\alpha = .89$) and 1.34 on the Avoidance subscale ($SD = 0.67$; $\alpha = .68$). Consistent with prior research, scores on the subscales were significantly correlated, $r(54) = .37$, $p = .0058$.

Results

Preliminary analyses indicated that gender was not related to self-distancing and did not moderate any of the results reported below. Therefore, it is not discussed further.

Cross-sectional relationships at Time 1. We first examined the relationship between self-distancing, emotional reactivity, thought content, and avoidance with zero-order correlations (see Table 1). We then ran multiple regression analyses to examine the unique variance explained by self-distancing for each outcome variable while controlling for both memory age and the resolution status of the experience (see Table 2). Neither covariate moderated the key findings.

Emotional reactivity. As Table 1 illustrates, a significant negative relationship was observed between spontaneous self-distancing and emotional reactivity, indicating that the more participants adopted a self-distanced perspective while reflecting on their feelings, the less emotional reactivity they experienced. Furthermore, the relationship between spontaneous self-distancing and emotional reactivity remained significant when memory age and resolution of the experience were statistically controlled for (see Table 2).

Thought content: Recounting versus reconstruing. As hypothesized, self-distancing correlated negatively with recounting and positively with reconstrual even though the latter was not statistically significant (see Table 1). These relationships remained unchanged when the effects of the covariates were partialled out (see Table 2).

We next examined whether self-distancing moderated the degree to which participants engaged in recounting versus reconstruing. We conducted general linear models analysis using the SAS statistical package on thought content with type of thought content (recounting vs. reconstruing) as the within-subject predictor and self-distancing as the between-subjects predictor. Memory age and perceived resolution of the experience were included as covariates.

Consistent with prior findings, there was a main effect of thought content, $F(1, 52) = 21.02$, $p < .0001$, indicating that participants reported greater recounting than reconstrual in general, controlling for the covariates (see Table 1 for means). In addition, this effect was moderated by self-distancing, Type of Thought Content $\times$ Distancing interaction, $F(1, 52) = 7.45$, $p = .0086$, but not by memory age ($F < 1$) or perceived resolution at Time 1, $F(1, 52) = 2.26$, $p = .12$. To further clarify the meaning of this interaction, we created difference scores by subtracting reconstruing from recounting for each individual. Higher scores on

Table 1
Descriptive Statistics and Intercorrelations for Key Variables in Study 1

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12
Time 1														
1. Self-distancing	3.41	1.82	—	−.31*	−.35*	.18	−.12	−.02	.33*	.48*	−.43*	.54*	−.39*	.00
2. Emotional reactivity	4.18	1.65		—	.60*	−.23†	.23†	.13	−.17	−.17	.32*	−.34*	.21	.12
3. Recounting	4.29	1.84			—	.13	.10	−.08	−.19	−.33	.50*	−.37*	.20	.07
4. Reconstruing	3.04	1.28				—	−.11	−.27*	.24†	−.02	.00	.05	.00	−.04
5. Avoidance	3.69	1.52					—	.13	.05	−.28*	.16	−.13	.23†	.23†
6. Memory age	1.37	1.31						—	.00	.06	.00	−.02	−.03	.22
7. Resolution	3.68	1.79							—	.10	−.20	.18	−.13	−.10
Time 2														
8. Self-distancing	3.75	2.01								—	−.41*	.45*	−.35*	.06
9. Emotional reactivity	3.21	1.20									—	−.67*	.62*	.25†
10. Resolution	4.43	1.67										—	−.56*	−.25†
11. IES–Intrusions	1.29	0.83											—	.37*
12. IES–Avoidance	1.34	0.68												—

Note. $N = 56$ except for intrusions and avoidance at Time 2 (Ns = 55). IES = Impact of Event Scale.
† $p < .10$. * $p \leq .05$.

this index indicated greater predominance of recounting relative to reconstruing. Controlling for memory age and perceived resolution, self-distancing was negatively correlated with this difference score (see Table 2), indicating that the predominance of recounting over reconstruing decreased as self-distancing increased.

Thought content as the mediator. Next, following Baron and Kenny (1986), we examined whether the relationship between self-distancing and emotional reactivity was mediated by differences in thought content. Because self-distancing was related to the balance between recounting and reconstruing, we used predominance of recounting over reconstrual (the difference score) as the key thought content mediator variable (see Kross & Ayduk, 2008, for a detailed discussion of this analytic approach). These analyses also controlled for memory age and perceived resolution.

As reported above, self-distancing was significantly associated with emotional reactivity and thought content. Moreover, when both thought content and self-distancing were included as separate predictors of emotional reactivity in a multiple regression analysis, thought content was a significant predictor of emotional reactivity ($\beta = .66$), $t(51) = 5.67$, $p < .0001$, whereas self-distancing was not ($\beta = -.05$, $t < 1$; Sobel's $z = 2.45$, $p = .013$; see Figure 1). Thus, thought content fully mediated the association between self-distancing and emotional reactivity.

Avoidance. Self-distancing was not positively associated with avoidance (see Table 1). On the contrary, there was a nonsignificant negative relationship between self-distancing and avoidance. Additional evidence highlighting the distinction between self-distancing and avoidance comes from correlational analyses examining the relationship between each of these variables and emotional reactivity. Whereas self-distancing correlated significantly negatively with emotional reactivity, higher levels of avoidance correlated marginally positively with emotional reactivity (see Table 1).

Prospective and longitudinal relationships. Table 2 presents the relationship between Time 1 self-distancing and outcome variables at Time 2 derived from multiple regression analyses in which

Table 2
Standardized Parameter Estimates From Multiple Regression Analyses in Study 1

	Predictor			
Dependent variable	Time 1 distancing	Time 1 memory age	Time 1 resolution	Time 2 baseline mood
Time 1				
Emotional reactivity	−.29*	.13	−.07	—
Recounting	−.33*	−.08	−.09	—
Reconstruing	.11	−.26*	.20	—
Predominance of recounting over reconstrual	−.35**	.09	−.20	—
Avoidance	−.16	.13	.11	—
Time 2				
Emotional reactivity	−.42***	−.004	−.03	.37**
Resolution	.56***	−.02	−.04	−.32**
IES–Intrusions	−.41**	−.01	.03	.33**
IES–Avoidance	.03	.24†	−.08	.22†

Note. IES = Impact of Event Scale.
† $p \leq .10$. * $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

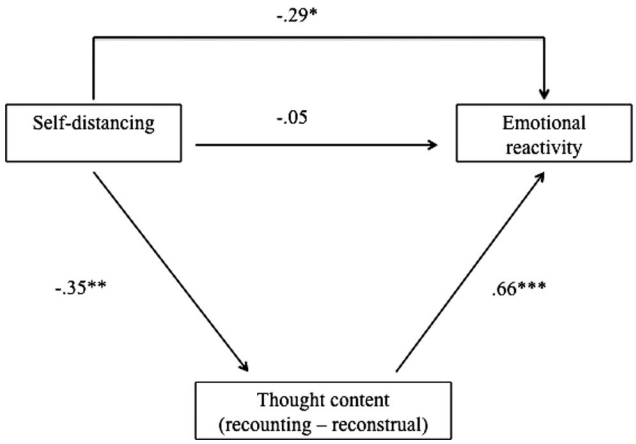

Figure 1. Standardized betas from path analyses examining the role of thought content (i.e., predominance of recounting over reconstrual) in mediating the relationship between self-perspective and emotional reactivity in Study 1. The direct arrow between self-distancing and emotional reactivity shows the relationship between these two variables after thought content has been taken into account. All analyses control for resolution and memory age. * $p \leq .05$. ** $p \leq .01$. *** $p \leq .005$.

Time 1 resolution ratings and memory age were included as covariates. These analyses also controlled for baseline negative affect at Time 2.

Emotional reactivity and perceived resolution at Time 2. As Table 1 indicates, participants who self-distanced to a greater degree at Time 1 reported lower emotional reactivity to and higher levels of perceived resolution about the same eliciting event at Time 2. However, the most important question for testing longitudinal relationships was whether Time 1 spontaneous self-distancing predicted Time 2 ratings on emotional reactivity and perceived resolution, controlling for Time 1 ratings on each of these outcomes. Because the analyses reported in Table 2 already controlled for Time 1 resolution status, the finding on Time 2 resolution status presented in Table 2 can be interpreted as showing that people who self-distanced to a greater degree at Time 1 perceived their recalled negative experience as being more resolved at Time 2. Subsequent analyses revealed a complementary pattern of findings for emotional reactivity. That is, greater self-distancing at Time 1 predicted significantly lower levels of emotional reactivity at Time 2, controlling for participants' level of reactivity at Time 1 ($\beta = -.38$), $t(50) = 2.98$, $p < .0045$.[1]

We next examined the issue of reverse causality, that is, whether self-distancing at Time 2 was the result of having lower emotional reactivity to start with. We regressed Time 2 self-distancing on Time 2 baseline negative mood, as well as Time 1 levels of self-distancing, emotional reactivity, resolution status, and memory age. The results showed that Time 1 emotional reactivity was not a significant predictor of Time 2 self-distancing ($\beta = -.05$; $t < 1$).

Intrusive ideation and avoidance at Time 2. Consistent with our hypotheses, people who exhibited greater self-distancing at Time 1 experienced lower levels of intrusive ideation about the eliciting event in the month preceding the Time 2 assessment. Importantly, this effect was not driven by avoidance, as no relationship was observed between Time 1 self-distancing and avoidance measured by the IES (see Table 2 for both findings).

Mediation analyses: Does thought content at Time 1 mediate the relationship between Time 1 self-distancing and Time 2 outcomes? Given the role thought content played in mediating the link between self-distancing and emotional reactivity at Time 1, we examined whether this mediator also explained the associations between distancing and Time 2 outcomes—emotional reactivity, resolution status, and intrusions (controlling for the covariates and Time 1 values of each variable where applicable). None of the mediation models were significant because in the third step of mediation, thought content failed to predict Time 2 outcomes (emotional reactivity: $\beta = .20$, $p = .12$; resolution: $\beta = -.08$, $p = .68$; intrusions: $\beta = -.06$, $p = .66$).

Mediation analyses: Does perceived resolution at Time 2 mediate the relationship between Time 1 self-distancing and Time 2 outcomes? Because self-distancing was related to perceived resolution status at Time 2 and because perceived resolution can be conceptualized as an index of construal change, we also explored whether the associations between self-distancing and other Time 2 outcomes (emotional reactivity, intrusions) were mediated by this variable. All analyses included Time 1 resolution, memory age, and Time 2 baseline negative affect as covariates (for emotional reactivity, Time 1 ratings on this variable were also included as a covariate). As reviewed earlier, in all cases the first two conditions required for mediation were met, as the predictor (self-distancing at Time 1) was significantly associated with each Time 2 outcome as well as the proposed mediator. In the third step of mediation analyses, Time 2 resolution was included together with Time 1 self-distancing as an additional predictor of each Time 2 outcome. These analyses provided evidence for mediation by revealing that Time 2 resolution was a significant predictor of emotional reactivity as well as intrusions, whereas the direct relationships between Time 1 self-distancing and each outcome were significantly attenuated (emotional reactivity, Sobel's $z = 3.02$, $p = .0024$; intrusions, Sobel's $z = 2.43$, $p = .015$; see Figure 2, Panels A and B, respectively).

Relationship to rumination. Although the RRS was administered at Time 2, individual differences in rumination should be stable across the time period that separated Time 1 and Time 2 assessments because RRS taps into trait rumination. Therefore, we examined the relationship between self-distancing and rumination using Time 1 and Time 2 self-distancing ratings separately as well as via a composite index averaged across Time 1 and Time 2 assessments. All of these indices were positively correlated with rumination even though the association with Time 2 distancing fell short of statistical significance: Time 1 self-distancing, $r(54) = -.29$, $p < .04$; Time 2 self-distancing, $r(54) = -.20$, $p = .15$; composite index of self-distancing, $r(54) = -.28$, $p < .04$.

[1] In secondary analyses, we examined the unique effects of Time 1 and Time 2 self-distancing on longitudinal outcome variables by repeating the analyses reported in Table 2 and including Time 2 self-distancing as an additional predictor. Time 1 self-distancing continued to significantly predict resolution status ($\beta = .42$, $p = .0014$), emotional reactivity ($\beta = -.27$, $p = .042$), and intrusions ($\beta = -.29$, $p = .05$). In these analyses, Time 2 self-distancing also significantly or marginally predicted each of these outcomes (resolution, $\beta = .28$, $p = .02$; emotional reactivity, $\beta = -.31$, $p = .017$; intrusions, $\beta = -.25$, $p = .07$).

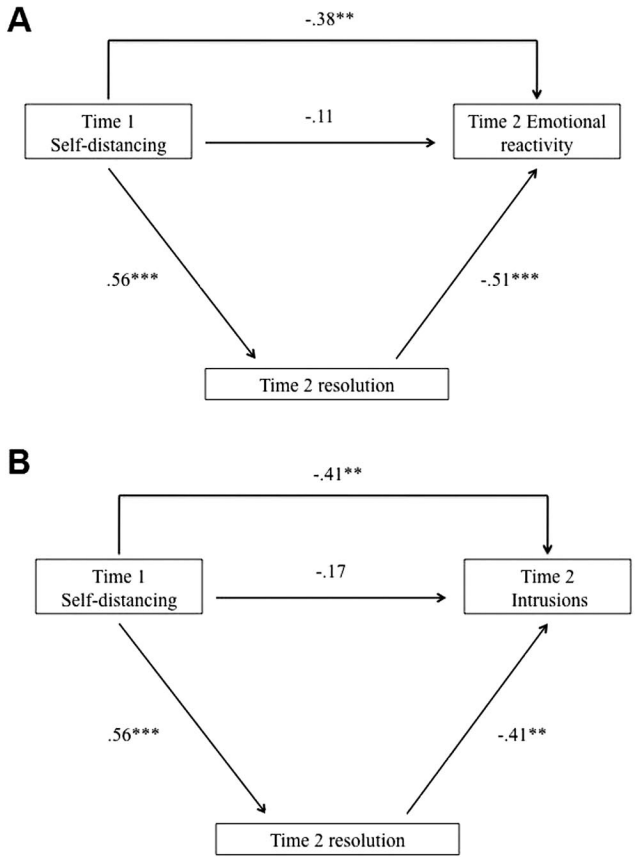

Figure 2. Standardized betas from path analyses examining the role that perceived resolution at Time 2 plays in mediating the relationship between Time 1 self-distancing and Time 2 emotional reactivity (Panel A) and intrusions (Panel B) in Study 1. The direct arrow between self-distancing and emotional reactivity shows the relationship between these two variables after Time 2 resolution ratings have been taken into account. All analyses control for memory age and Time 1 resolution. In addition, the analyses for emotional reactivity control for Time 1 level of this outcome. ** $p \leq .01$. *** $p \leq .001$.

Next we repeated all the key analyses we ran in the preceding sections controlling for rumination to assess the unique explanatory power of self-distancing. The significant relationship of Time 1 self-distancing to the outcomes reported in Table 2 remained unchanged (all ps $< .05$) except its relationship to Time 1 emotional reactivity and recounting, which were somewhat attenuated ($\beta = -.22$, $p = .12$ and $\beta = -.23$, $p = .09$, respectively). In these analyses, trait rumination showed the theoretically expected relationship to Time 1 recounting ($p = .05$) and emotional reactivity ($p = .09$) but not to other thought content indices (ps $\geq .16$). It was also a significant predictor of all Time 2 outcomes presented in Table 2 (ps $< .05$).

Summary and Discussion

Findings from Study 1 indicated that spontaneous self-distancing was associated with a similar profile of responses on self-report emotional reactivity and thought content as experimentally manipulated self-distancing. Specifically, the more participants spontaneously self-distanced while reflecting on their past experience, the less they recounted the event and the more they reconstrued it. This shift in thought content (less recounting relative to reconstruing) in turn explained the association between self-distancing and emotional reactivity.

Importantly, this study provided several strands of evidence that argue against the hypothesis that spontaneous self-distancing facilitates avoidance. First, cross-sectional analyses showed that the negative association between spontaneous self-distancing and emotional reactivity (at Time 1) could not be explained by avoidance because self-distancing was not significantly associated with avoidance. Second, longitudinal data demonstrated that the degree to which participants spontaneously self-distanced at Time 1 negatively predicted how upset they felt approximately 7 weeks later when they recalled the same experience, even after controlling for initial levels of emotional reactivity. In addition, participants who self-distanced to a greater degree at Time 1 reported experiencing less intrusive ideation about the experience during the month preceding Time 2 assessment, whereas they did not report engaging in cognitive avoidance to a greater degree during the same time period. Hence, the adaptive function of self-distancing over time could not be explained by avoidance. Instead, this effect was explained by construals. That is, self-distancing was positively associated with participants' perceptions of how resolved their recalled experience was at Time 2, which in turn mediated the relationship between self-distancing and Time 2 outcome variables (emotional reactivity, intrusions). These findings provide evidence that is consistent with the prediction that spontaneous self-distancing facilitates adaptive self-reflection over time and does so by influencing the way people construe past experiences.

Study 1 also addressed several additional issues. First, emotional reactivity at Time 1 did not predict changes in self-distancing over time. This supports the prediction that self-distancing influences emotional reactivity rather than the other way around. Second, we found the expected negative association between spontaneous self-distancing and trait rumination—a finding that is consistent with the notion that distancing may protect against the most maladaptive form of self-focus, rumination. Furthermore, spontaneous self-distancing continued to predict most of the key outcomes while controlling for trait rumination. Hence, it was not redundant with rumination in its explanatory power.

Study 2

Study 2 aimed to conceptually replicate and extend the Study 1 findings in multiple ways. First, in addition to assessing self-reported emotional reactivity like Study 1, Study 2 examined how spontaneous self-distancing tracks with the trajectory of physiological distress over the time period during which people (a) recalled a negative autobiographical experience (recall phase), (b) reflected on their feelings surrounding their memory (reflection phase), and (c) rested and relaxed following the self-reflection task (recovery phase). We were particularly interested in physiological distress during recovery because rumination has been associated with delayed physiological recovery from stressors (Gerin, Davidson, Christenfeld, Goyal, & Schwartz, 2006), which is a key risk factor for various forms of cardiovascular and somatic disease (Brosschot, Gerin, & Thayer, 2006; Glynn, Christenfeld, & Gerin, 2002; McEwen, 1998). Thus, continued physiological distress

during recovery even after a stressor has been removed is an important benchmark against which to gauge the *substantive significance* of how adaptive spontaneous self-distancing is in everyday life.

Second, Study 2 aimed to further examine the relationship between spontaneous self-distancing and avoidance. Although findings from Study 1 suggested that greater self-distancing was not associated with higher avoidance, Study 1 relied on self-report measures of avoidance, which are not only open to demand but are also limited in their use if avoidance occurs at an unconscious level. Study 2 addressed this issue first by using a computer protocol (rather than an untimed instruction packet) in which participants' response times to various components of the study were measured. Specifically, we conceptualized the amount of time participants spent reflecting on their memory during the open-ended phase of the experiment as a behavioral marker of avoidance (i.e., shorter response times = greater behavioral avoidance). Moreover, Study 2 examined the dissociation between self-reported emotional reactivity and physiological reactivity, which can be considered to tap into unconscious avoidance processes. Prior research indicates that a negative relationship between physiological reactivity and emotional reactivity (i.e., reporting less emotion but displaying enhanced physiological reactivity) is a marker of repression—an extreme form of avoidance (Bonanno, Keltner, Holen, & Horowitz, 1995; Newton & Contrada, 1992).

Finally, Study 2 aimed to examine the empirical association of spontaneous self-distancing to trait reappraisal and suppression (Gross & John, 2003) and to test its predictive utility against these constructs. On the basis of our prior experimental findings we did not expect self-distancing to covary systematically with trait tendencies to suppress or avoid emotion. We also did not expect to observe a strong relationship between reappraisal and self-distancing. Although self-distancing facilitates reconstrual, and hence, should conceptually be related to trait reappraisal, it may be one of many tactics people high in dispositional reappraisal use to change the way they feel about negative experiences (e.g., downward social comparison, positive illusions). Therefore, we expected self-distancing to be only loosely associated with trait reappraisal and to continue to predict key outcomes in its presence.

Sample and Procedure

Participants were 74 University of California, Berkeley undergraduates recruited from the introductory participant pool for a study on mental imagery, memory, and physiological responses. One participant indicated that he or she was unable to recall a relevant memory, one participant omitted all paper-and-pencil questionnaires, and one participant could not complete the study because of a computer failure. This left 71 participants (53 women, 18 men; M_{age} = 20.21 years, SD_{age} = 3.96) with analyzable data. Of the whole sample, 38.03% were Asian or Asian American, 2.82% were African American, 5.63% were Hispanic, 2.82% were Native Hawaiian, 35.21% were Caucasian, 7.04% were Middle Eastern, and 8.45% were from other ethnicities.

After providing informed consent, participants were seated at a computer terminal with a pair of headphones attached to it and connected to BIOPAC physiological recording equipment (Biopac Systems, Inc., Santa Barbara, CA). Participants were then told that they would receive instructions both on the computer screen and through the attached headphones. They were instructed to begin the experiment by pressing the space bar as soon as the experimenter left the room.

The study consisted of five phases: baseline, recall, reflection, questionnaires, and recovery. The computer program was synchronized with physiological recording equipment so that the beginning and end of each study phase was marked in the physiological data file. First, the computer instructed the participants to relax and sit quietly for 5 min for baseline measurements. At the end of the 5-min baseline period, participants heard a brief message welcoming them to the study and instructing them to recall an anger-related interpersonal experience, following the same instructions used by Kross et al. (2005). They were instructed to press the space bar as soon as they recalled such an experience (M = 61.85 s, SD = 8.06). During the reflection period that followed recall, participants were asked to ponder their deepest thoughts and feelings regarding their experience until they were ready to move on. This initial reflection period was left open-ended to assess whether self-distancing was related to behavioral avoidance. The average length of the reflection phase was 22.62 s (SD = 9.31). To make sure that participants spent a reasonable amount of time reflecting on their emotions, however, this open-ended period was then followed by a fixed 60-s period in which they were instructed to continue pondering their feelings. Subsequently, participants completed a series of paper-and-pencil questionnaires (M = 20.53 min, SD = 345.58 s). During recovery, the final phase of the experiment, participants were instructed to sit quietly and relax for 5 min.

Materials and Measures

Memory prompt. Following Kross et al. (2005), participants were asked to recall an anger-eliciting event with the following instructions:

> No matter how well romantic partners and friends get along, there are times when they get annoyed about something the other person does, get into fights because they're in bad moods, or argue over major decisions. Take a few moments right now to recall a time when you experienced such conflict with a romantic partner or close friend—a time when you became truly enraged at this person. Although it may be difficult, most people can usually remember at least one incident. Please try to remember an experience that is relatively recent and unresolved and still highly upsetting to you. Take your time as you try to do this. Once such an event comes to mind, allow yourself to ponder this event, letting your deepest thoughts and feelings run through your mind for a few moments.

Spontaneous self-distancing. As in Study 1, participants were asked to indicate the degree to which they adopted a self-distanced perspective (1 = *predominantly immersed participant*, 4 = *both, more or less equally*, 7 = *predominantly distanced observer*) while they reflected on their experience (M = 4.07, SD = 1.81). Four participants' data on this question were not usable because they did not complete the questionnaire properly, leaving 67 participants with available data.

Emotional reactivity. Similar to Study 1, participants rated the (a) extent and (b) intensity with which they reexperienced the emotions that they originally felt during the experience (1 = *not at all*, 7 = *a lot*) while they reflected on their experience. These

ratings were correlated ($\alpha = .90$) and collapsed into an emotional reactivity index.

Questions comprising the aforementioned index were specific to participants' experience with respect to the memory recalled during the reflection phase of the study. However, as a more conservative test of our hypothesis, we also assessed the link between self-distancing and current affect without making an explicit reference to the memory of the experience recalled. Specifically, participants rated the degree to which they currently experienced each of the emotions (1 = *not at all*, 5 = *extremely*) listed on the Negative Affect subscale of the PANAS in the moment (Watson et al., 1988; $\alpha = .88$).

Emotional reactivity and negative PANAS scores were positively correlated, $r(70) = .42$, $p = .0003$, and in preliminary analyses yielded highly similar results. Therefore, for parsimony, they were averaged to create a composite index of negative affect after PANAS scores were rescaled to a 1–7 scale ($M = 3.09$, $SD = 1.08$).

Thought content. As in Study 1, participants rated the extent to which they focused on the specific chain of events and what was said and done as they reflected on their experience on a 7-point scale (1 = *strongly disagree*, 4 = *neutral*, 7 = *strongly agree*) to operationalize recounting ($M = 5.12$, $SD = 1.66$). Reconstrual was indexed by participants' ratings on items assessing reaching closure and developing a coherent understanding as in Study 1 (1 = *strongly disagree*, 4 = *neutral*, 7 = *strongly agree*; $\alpha = .68$; $M = 4.70$, $SD = 1.51$).

Covariates. We assessed the same covariates used in Study 1 using slightly different measures: (a) Participants indicated the exact number of years, months, and days since their recalled experience took place (memory age), which was recoded into days ($M = 492.36$, $SD = 721.82$), and (b) a dichotomous variable assessed the perceived resolution status of their recalled experience (1 = *resolved* [63.38%], 0 = *unresolved* [36.62%]). Memory age data were missing for three participants and these were replaced by the group mean. The distribution of memory age was skewed (skew = 3.35). To reduce skewness, these data were square-root transformed.

Physiological reactivity. We used total peripheral resistance (TPR)—a measure of the amount of constriction occurring in the peripheral autonomic nervous system—to index physiological reactivity, with higher elevations in TPR reflecting greater constriction. Higher TPR reactivity has been linked to threat appraisals in response to stress and is considered to reflect maladaptive coping, as greater vasoconstriction results in inefficient use of the physiological resources that have already been mobilized (e.g., Mendes, Blascovich, Hunter, Lickel, & Jost, 2007; Tomaka, Blascovich, Kelsey, & Leitten, 1993).

TPR is derived from blood pressure and cardiac output using the formula mean arterial pressure/CO $\times$ 80 (Sherwood et al., 1990), with higher numbers indicating greater constriction. In this study, impedance cardiographic (ZKG) and electrocardiographic (ECG) recordings sampled at 1,000 Hz by the BIOPAC MP150 module provided cardiac measures. Blood pressure measurements were collected using a Medwave continual blood pressure machine (Medwave, Inc., St. Paul, MN). This machine uses tonometric technology to assess blood pressure responses from the radial artery. It employs a "sweep" technique, which applies a varying force on the radial artery. The counterpressure in the artery produces a signal, which is digitized, recorded in Acqknowledge software (Biopac Systems, Inc., Santa Barbara, CA), and used to calculate blood pressure.

We followed established methods for artifact removal and data reduction (Mendes, 2009). Physiological data were scored for the baseline, recall, reflection, and recovery phases of the task. Due to equipment failure, physiological data were not recorded for 10 participants. For an additional nine participants, baseline data were not available (either due to random signal dropout or to noise), preventing us from being able to compute any reactivity scores. Finally, data from one participant who indicated he or she was going through prescription drug withdrawal were not included in the analyses, leaving us with a sample of 48 participants on whom we had both TPR and self-distancing data. Attrition was not related to self-distancing, $r(66) = .05$, $p = .70$. Sample sizes for each phase of the study differ because data were uncodable for different individuals at different time points.

Self-distancing was not significantly correlated with baseline TPR, $r(43) = .06$, $p = .70$. Therefore, following established norms for reporting physiological data (Mendes, 2009), we calculated reactivity scores by subtracting baseline from measurements at each phase of the study. Three reactivity scores that were 2.5 *SD*s away from the mean were recoded into the next highest value on their respective distributions.

Reappraisal and suppression. Participants in this study also completed the Emotion Regulation Questionnaire (ERQ; Gross & John, 2003), which measures individual differences in the use of reappraisal and suppression as emotion regulation strategies. Reappraisal involves reinterpreting an emotion-eliciting situation to improve one's mood (e.g., "I control my emotions by changing the way I think about them"), whereas suppression involves inhibiting emotional expression once emotions have been generated (e.g., "I control my emotions by not expressing them"). In this study, participants rated themselves on the ERQ using a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*). The means were 4.92 on reappraisal ($SD = 1.18$; $\alpha = .81$) and 3.11 on suppression ($SD = 1.36$; $\alpha = .78$).

Results

Consistent with Study 1, there were no gender differences associated with self-distancing, and none of the findings reported below were moderated by participants' gender. Therefore, this variable is not discussed further. The general data analytic approach for this study was similar to that in Study 1. Specifically, Table 3 presents zero-order correlations among all variables, and Table 4 presents standardized parameter estimates from multiple regression analyses controlling for the covariates. None of the key findings reported below were moderated by memory age or the resolution status of the experience.

Emotional reactivity. Self-distancing was negatively associated with self-reported emotional reactivity and positively correlated with memory age and perceived resolution (see Table 3). As in Study 1, the relationship between self-distancing and emotional reactivity remained significant when memory age and perceived resolution were statistically controlled (see Table 4).

Physiological reactivity. We first examined whether the imagery task elicited physiological stress at the group level by investigating whether TPR reactivity scores (i.e., deviations from

Table 3
Intercorrelations Among Key Variables in Study 2

Variable	*n*	*M*	*SD*	1	2	3	4	5	6	7	8	9
1. Self-distancing	67	4.07	1.81	—	−.34*	−.16	.47*	−.33*	−.41*	−.34*	.26*	.26*
2. Emotional reactivity	71	3.09	1.08		—	.45*	−.25*	−.04	.14	.15	−.09	−.25*
3. Recounting	71	5.12	1.66			—	.19	−.13	.09	.46*	.04	−.08
4. Reconstruing	71	4.70	1.51				—	−.22	−.32*	.01	.20†	.45*
5. TPR, "recall"	44	84.09	78.92					—	.78*	.19	−.13	.11
6. TPR, "reflect"	49	63.13	65.39						—	.32*	−.14	−.05
7. TPR, "recovery"	39	42.26	69.19							—	.15	−.20
8. Memory age	71	18.27	12.62								—	.12
9. Resolution	71	0.63	0.48									—

Note. TPR = total peripheral resistance.
† $p \leq .10$. * $p \leq .05$.

baseline) were significantly greater than zero. Participants' reactivity scores at recall, $t(43) = 7.07$, $p < .0001$; reflection, $t(48) = 6.76$, $p < .0001$; and recovery ($M = 768.19$, $SD = 222.03$), $t(38) = 3.81$, $p < .0005$, periods were all significantly greater than zero, indicating that the imagery task successfully induced physiological stress.

Next, we examined whether TPR reactivity was significantly associated with self-distancing. Because available TPR data differed from one phase to the other due to missing values, we first conducted separate analyses on each TPR reactivity score using all available data for each phase, with self-distancing as the main between-subjects predictor and including memory age and resolution as covariates. As Table 4 illustrates, self-distancing showed a significant negative relationship to physiological reactivity in all phases of the study. Subsequently we ran a multivariate regression analysis on physiological reactivity with self-distancing as the between-subjects predictor and study phase (recall, reflection, recovery) as a within-subject predictor, including memory age and resolution as covariates. This model restricts the analysis to the subset of the participants who had TPR reactivity scores from all phases of the study ($n = 34$). This analysis revealed a significant effect of self-distancing, $F(1, 30) = 8.81$, $p = .0058$, and this relationship was not moderated by study phase, confirming that self-distancing was related to lower physiological reactivity across all phases of the study (see Figure 3). No other effects were significant ($ps > .31$).

Table 4
Standardized Parameter Estimates From Multiple Regression Analyses in Study 2

	Predictor		
Outcome	Self-distancing	Memory age	Resolution
Emotional reactivity	−.29*	−.03	−.14
Recounting	−.18	.08	−.02
Reconstruing	.36**	.09	.31**
Predominance of recounting over reconstrual	−.44***	.00	−.27**
TPR, "recall"	−.35*	−.02	.13
TPR, "reflect"	−.41**	.03	−.03
TPR, "recovery"	−.36*	.25	−.16

Note. TPR = total peripheral resistance.
* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Thought content: Recounting versus reconstruing. Consistent with Study 1, self-distancing correlated positively with reconstrual (see Table 3). Its relationship to recounting was in the theoretically expected direction but not statistically significant. These relationships remained unchanged when memory age and perceived resolution were controlled (see Table 4). To examine whether the balance between recounting and reconstrual was related to self-distancing, a general linear models analysis was conducted on thought content with type of thought content (recounting vs. reconstruing) as the within-subject predictor and self-distancing as the between-subjects predictor. Memory age and perceived resolution were included as covariates. Replicating findings from Study 1, there was a main effect of type of thought content, $F(1, 63) = 34.90$, $p < .0001$, such that overall, participants reported engaging in recounting more than reconstruing (see Table 2 for means). However, this main effect was qualified by a significant Type of Thought Content × Self-Distancing interaction, $F(1, 63) = 16.35$, $p < .0001$. In this study, the Type of Thought Content × Perceived Resolution interaction was also significant, $F(1, 63) = 6.43$, $p = .014$, whereas the two-way interaction with memory age was not ($F < 1$).

Similar to Study 1, we created difference scores by subtracting reconstruing from recounting for each individual to index the predominance of recounting relative to reconstruing. Both self-distancing and perceived resolution correlated negatively with these difference scores (see Table 4), indicating that the predominance of recounting over reconstruing was attenuated to the degree that individuals reported greater self-distancing or reflected on events that they perceived as having already been resolved.

Mediation models.

Emotional reactivity. We next examined whether the relationship between self-distancing and emotional reactivity was mediated by thought content (i.e., predominance of recounting over reconstrual), controlling for memory age and resolution. As indicated earlier (see Table 4), self-distancing was significantly related both to emotional reactivity (the outcome) and to thought content (the mediator). In the third step necessary to establish mediation, thought content predicted greater emotional reactivity ($\beta = .48$), $t(62) = 3.69$, $p = .0003$, and the direct relationship between self-distancing and emotional reactivity was no longer significant

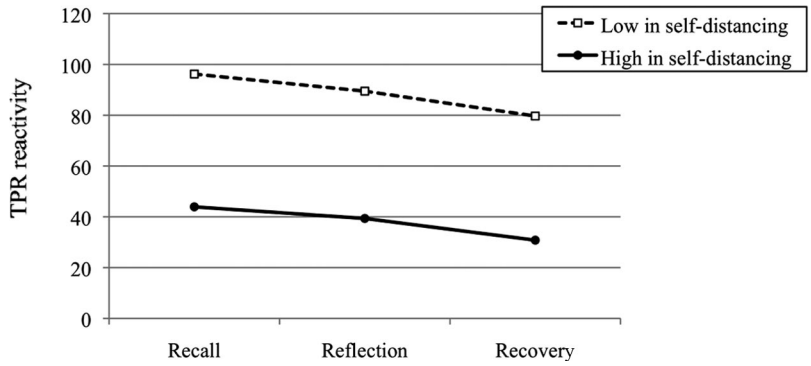

Figure 3. Total peripheral resistance (TPR) reactivity across the key study periods as a function of level of self-distancing in Study 2. Zero reactivity indicates equivalence to baseline.

(β = –.07, $t < 1$; Sobel's $z = 2.72$, $p = .0064$). Thus, thought content fully mediated the association between self-distancing and emotional reactivity (see Figure 4).

Physiological reactivity. We conducted mediation analyses on TPR reactivity scores during the reflection and the recovery periods only, because TPR reactivity during recall itself preceded the thought processes participants engaged in during the reflection period (which the recounting and reconstruing questions targeted). As discussed earlier, self-distancing was significantly related to TPR reactivity during reflection and recovery periods, as well as to thought content. However, when both self-distancing and thought content were entered as predictors, thought content did not significantly predict TPR reactivity during the reflection period (β = .24), $t(41) = 1.33$, $p = .19$, and self-distancing remained a predictor that approached significance (β = –.29), $t(41) = 1.69$, $p = .10$. For TPR during the recovery period, neither thought content nor self-distancing explained unique variance in the third step of the mediation: thought content, β = .30, $t(32) = 1.49$, $p = .16$; self-distancing, β = –.18, $t < 1$, $p = .36$. Thus, physiological reactivity was not mediated by thought content.

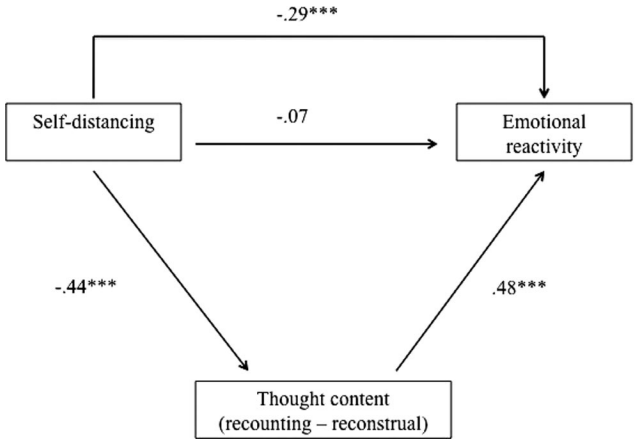

Figure 4. Standardized betas from path analyses examining the role of thought content (i.e., predominance of recounting over reconstrual) in mediating the relationship between self-perspective and emotional reactivity in Study 2. The direct arrow between self-distancing and emotional reactivity shows the relationship between these two variables after thought content has been taken into account. All analyses control for resolution and memory age. *** $p \leq .005$.

Avoidance and repression. First, we examined the relationship of self-distancing to the amount of time participants spent recalling their experience and thinking about it during the open-ended portion of the reflection period. Neither of these indices was significantly correlated with self-distancing, $r(66) = .02$, $p = .88$, and $r(66) = .15$, $p = .22$, respectively.

We next examined the dissociation between self-reported emotional reactivity and physiological reactivity as a function of spontaneous self-distancing. To do this, we predicted emotional reactivity from physiological reactivity, self-distancing, and their interaction, including memory age and resolution as covariates. We averaged TPR reactivity across the three study phases for the sake of simplicity, as preliminary analyses yielded identical results when analyses were conducted separately for physiological reactivity at each study phase. All predictors were group centered. The results revealed a significant main effect of self-distancing (β = –.35), $t(42) = 2.49$, $p < .02$, and a significant interaction between physiological reactivity and self-distancing (β = .41), $t(42) = 3.23$, $p = .0024$. No other effects were significant.

To understand the meaning of this interaction, we examined the association between physiological reactivity and emotional reactivity for individuals high and low in self-distancing (1 *SD* above and below the mean on self-distancing, respectively), following Aiken and West (1991). These analyses indicated that among individuals high in spontaneous self-distancing, there was a significant positive association between self-reported emotional and physiological reactivity (β = .45), $t(42) = 2.25$, $p < .03$—a pattern inconsistent with repression. In contrast, this relationship was significantly negative among those low in spontaneous distancing (β = –.41), $t(42) = 2.25$, $p < .03$.

Relationship to trait reappraisal and suppression. Spontaneous self-distancing was not significantly correlated with either trait reappraisal, $r(65) = .13$, $p = .30$, or trait suppression, $r(65) = .07$, $p = .57$. We nevertheless reran the analyses presented in Table 4 including reappraisal as an additional predictor because of the conceptual overlap between the constructs. In these analyses, the significant associations between distancing and key variables reported in Table 4 continued to remain significant (all ps $< .05$). Trait reappraisal was not significantly related to any of these

variables except the positive association it showed with reconstrual ($\beta = .28$), $t(62) = 2.81$, $p < .007$.

Summary and Discussion

Study 2 replicated the cross-sectional findings observed in Study 1 by showing that the more participants spontaneously self-distanced, the less emotional reactivity they reported and that this relationship was mediated by thought content (less recounting and more reconstruing). It additionally showed that self-distancing was negatively correlated with physiological reactivity across all study periods including the recovery period, demonstrating how spontaneous self-distancing relates to distress not only during the thin slice of time during which participants reflected on their emotions but also to how they felt about their experience over time. Although the association between spontaneous self-distancing and lower physiological distress during recovery does not provide a direct link between self-distancing and physical health, it suggests that self-distancing may be associated with important physical health outcomes in the long run if habitually used to cope with negative experiences.

Findings from the present study also provided two additional pieces of evidence demonstrating that the regulatory effects of spontaneous self-distancing on affect are not a function of avoidance. First, by recording the amount of time participants spent recalling and reflecting on their negative autobiographical memories, the present study allowed us to examine whether self-distancing leads to reductions in emotional reactivity and physiological reactivity by leading individuals to simply spend less time (i.e., avoid) focusing on their memories. The present findings provided no evidence to support such an avoidance explanation because self-distancing was not correlated with recall time or reflection time. Second, our analysis of the dissociation between self-reported emotional reactivity and TPR reactivity indicated that people low in self-distancing (i.e., high in self-immersion) showed a significant negative correlation between self-reported emotional reactivity and physiological reactivity that is characteristic of a repressive pattern of coping. In contrast, those high in self-distancing displayed a significant positive correlation between these reactivity indexes, indicating greater attunement between explicit and implicit reactivity. This finding demonstrates that the lower emotional reactivity associated with greater self-distancing is not the result of defensive avoidance or repression.

Although Study 2 replicated findings from Study 1 showing thought content as a significant mediator of the self-distancing–emotional reactivity relationship, we did not find evidence for similar mediation for physiological reactivity. In the present study, physiological reactivity indices were not significantly correlated with self-reported emotional reactivity—a finding consistent with other research showing lack of coherence among different components of emotional experience (e.g., Mauss, Levenson, McCarter, Wilhelm, & Gross, 2005). Therefore, it is also possible that emotional and physiological reactivity associated with spontaneous distancing are mediated by different construal mechanisms. For example, in previous research higher TPR reactivity was associated with threat appraisals in which demands of a situation are perceived to exceed one's coping resources (e.g., Tomaka et al., 1993), which were not directly measured in Study 2 and should be investigated in future research.

Finally, spontaneous self-distancing was not reliably associated with either trait suppression or reappraisal, and it continued to predict key outcomes while controlling for reappraisal. As we suggested before, self-distancing may be one of many different cognitive tactics people can use to reappraise a negative event. In this vein, the reappraisal subscale of the ERQ is silent about the specific strategies one can adopt in the service of reappraisal. Overall, these findings demonstrate that spontaneous distancing is a distinct construct from trait reappraisal and is not redundant with it in its predictive utility.

Study 3

Studies 1 and 2 provided converging evidence supporting the prediction that spontaneous self-distancing buffers individuals against heightened levels of emotional reactivity in the short term and facilitates emotional processing over time. All of these findings document the beneficial impact of spontaneous self-distancing for the individual at the intrapersonal level of analysis. However, it is well established that rumination has implications for interpersonal processes as well. For example, people who ruminate report receiving less emotional support in their relationships (Nolen-Hoeksema & Davis, 1999), are perceived less favorably by other people (Nolen-Hoeksema & Larson, 1999), and generate poor solutions to interpersonal problems compared to a variety of control groups (Lyubomirsky & Nolen-Hoeksema, 1995). Therefore, to the extent that spontaneous self-distancing buffers individuals against rumination, we predicted that it should also be associated with more positive interpersonal problem-solving ability and improved interpersonal relationships. The main goal of Study 3 was to address this issue in order to further probe the adaptiveness of spontaneous self-distancing.

Study 3 addressed this issue by examining the relationship between spontaneous self-distancing and conflict behavior among couples in ongoing relationships during the course of (a) a 21-day daily diary study and (b) a lab-based conflict discussion task. We chose to focus on conflict behavior because conflicts are one of the most common sources of daily distress adults face (Bolger, DeLongis, Kessler, & Schilling, 1989). Furthermore, the way partners behave during conflicts has implications for relationship and personal well-being (Eaker, Sullivan, Kelly-Hayes, D'Agostino, & Benjamin, 2007; Filsinger & Thoma, 1988; McGonagle, Kessler, & Gotlib, 1993). For example, whereas constructive behaviors, including problem-solving behavior and partner perspective taking, during conflicts are beneficial for the longevity of relationships (Arriaga & Rusbult, 1998; Heavey, Layne, & Christensen, 1993), escalation of the conflict by expressing hostility undermines it (Arriaga & Rusbult, 1998; Clements, Cordova, Markman, & Laurenceau, 2004; Gottman, Coan, Carrere, & Swanson, 1998; Levenson & Gottman, 1983). Consequently, examining how spontaneous self-distancing relates to conflict behavior provides an opportunity to further examine the adaptive value of this cognitive strategy for real-world outcomes. The combination of diary and lab-based conflict data is powerful because whereas the diary data provide a glimpse into the role of self-distancing processes in couples' daily lives, the lab-based data provide observational information about interpersonal behavior. Thus, the diary and lab-based data can cross-validate each other.

Finally, Study 3 had available data on the ERQ (Gross & John, 2003) and these data were used to replicate findings from Study 2. That is, we examined how spontaneous self-distancing relates to trait reappraisal and suppression and assessed its unique predictive utility in the presence of reappraisal.

Sample and Procedure

In Study 3 we made use of unpublished data collected in a large study of couples in romantic relationships. Details of the sample and procedure are described in Ayduk, Gyurak, and Luerssen (2009). Briefly, 53 monogamous, nonmarried, heterosexual couples (M_{age} = 20.58 years, SD_{age} = 2.43) were recruited for a 2-hr intake laboratory session and a 21-day diary study. Couples had been in the relationship for an average of 16.52 months (SD = 14.37). Two participants did not provide racial or ethnic information. In the rest of the sample, 46.15% of the participants were Asian, 35.58% were Caucasian, and 17.31% were an "other" race. Ethnically, 9.71% indicated being Hispanic. Same-race/ethnicity relationships accounted for 63.46% of the sample (33.33% Caucasian, 57.58% Asian, 9.09% Hispanic).

Prior to the initial lab session, participants completed a package of background questionnaires assessing personality, relationship quality, and demographic information. They then participated in an intake session, during which they completed various tasks including a 15-min discussion of an area of conflict in their relationship. They were paid $30 each for completing these questionnaires and the intake session.

At the end of the intake session, participants received a Web link to the structured daily diary questionnaires they were to complete each day for 21 days. They were asked to complete the diary questionnaires alone and to refrain from discussing their responses with anyone until the study ended. An e-mail was sent to participants each evening to remind them to complete the diary. Participants entered their questionnaire responses online every day between 6 p.m. that night and 3 a.m. the following day. Questionnaire submissions were time stamped electronically, and participants could not modify their responses once they were made. Upon completion of the 21 diaries, each member of the couple received payment for a full $55, or a prorated amount based on their completion rate. The average response rate was 91.70% of diary days with no significant gender differences ($t < 1$). On average, less than 0.5% of the daily diaries had to be eliminated because responses were submitted outside of the specified time window.

Background Measures

Emotion Regulation Questionnaire (ERQ). Participants rated themselves on the ERQ using a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*) as part of the background questionnaire package. Although there was no significant gender difference for reappraisal ($p > .69$; men, $M = 4.61$, $SD = 1.08$; women, $M = 4.70$, $SD = 0.99$), men ($M = 3.40$, $SD = 1.19$) reported greater levels of suppression than did women ($M = 2.90$, $SD = 1.26$), $t(50) = 2.06$, $p < .05$. Reappraisal and suppression were positively associated ($B = .20$, $p \leq .012$). Partners' scores on the two subscales were not significantly correlated ($ps > .30$).

Daily Diary Measures

As part of the daily diary questionnaire participants indicated whether they experienced a conflict with their partner at the end of each day. Of the 106 individuals in the sample, 86 reported having at least one conflict with their partner during the 3-week period (range: 0–9; $M = 2.18$, $SD = 2.05$, $Mdn = 2$) with one conflict being the modal response. Members of a couple agreed about whether a conflict occurred on 91.1% of the days. On days when participants reported experiencing conflict, they also completed the following measures.

Spontaneous self-distancing. Participants were asked to rate the extent to which they adopted a self-distanced perspective as they reflected on their conflict when prompted to do so by the diary questionnaire. Self-distancing was measured with the same question used in Studies 1–2. The mean self-distancing rating (over participants and conflicts) was 3.12 ($SD = 1.76$).

Emotional reactivity. Participants indicated their agreement (1 = *strongly disagree*, 5 = *strongly agree*) with the following items: "Thinking about the event right now still makes me feel upset (e.g., rejected, angry, hurt, sad)" and "I reexperience the emotions I felt during the conflict when I think about it now." Ratings were averaged to create a composite emotional reactivity index ($\alpha = .81$; $M = 2.09$, $SD = 0.99$).

Perceived resolution. Perceived resolution of the conflict was assessed by participants' agreement ratings (1 = *strongly disagree*, 5 = *strongly agree*) with the statement "The conflict was resolved to my satisfaction" ($M = 2.73$, $SD = 1.39$).

Hostility towards partners. Participants rated their agreement (1 = *strongly disagree*, 5 = *strongly agree*) with the following items: "I did/said things that hurt my partner and made him/her feel not cared for" and "I acted in a hostile manner towards my partner" ($\alpha = .77$; $M = 2.23$, $SD = 0.91$).

Perceived hostility from partners. Participants rated their agreement with the following items: "My partner did/said things that hurt me and made me feel not cared for" and "My partner acted in a hostile manner towards me" ($\alpha = .78$; $M = 2.30$, $SD = 0.93$).

Laboratory-Based Conflict Discussion Task

During the lab session, after completing a baseline negative affect measure, participants engaged in a conflict discussion task modeled loosely after standard marital interaction paradigms (e.g., Heyman, Weiss, & Eddy, 1995). To identify a discussion topic, participants were first asked to rate how much stress a list of possible relationship conflicts posed for their relationship and how important each of these was to them. On the basis of the ratings, the experimenter identified a mutually agreed upon conflict that the partners rated as important and instructed the couple to discuss the problem for 15 min.

Baseline negative affect. Participants rated the degree to which (1 = *not at all*, 7 = *a lot*) they experienced a series of 10 negative emotions (e.g., upset, rejected, angry) before the conflict discussion. Ratings across these items were averaged to index baseline negative affect ($\alpha = .81$; $M = 1.64$, $SD = 0.50$).

Behavior during the conflict discussion. The conflict discussion task was unobtrusively videotaped and then coded by experienced coders at the State University of New York, Stony Brook,

using the Rapid Marital Interaction Coding System (RMICS; Heyman, Eddy, Weiss, & Vivian, 1995). The RMICS is the current successor to the Marital Interaction Coding System (MICS; Weiss & Summers, 1983). It is different from MICS in that it is a macroanalytic rather than a microanalytic coding system. The macroanalytic codes composing the RMICS have been derived from factor analyses of dyadic interaction data from more than a thousand couples coded microanalytically using the MICS (Heyman, Eddy, et al., 1995).

There were two key RMICS codes directly relevant to positivity–negativity of conflict behavior: hostility and constructive problem-solving discussion. The *hostility* code includes verbal and nonverbal expressions of negativity encompassing the microlevel codes of *turn-off* (i.e., a nonverbal response which communicates hostility, displeasure, disapproval, or disagreement), *negative voice tone* (i.e., hostile voice tone that accompanies nonnegative statements), *criticism* (i.e., dislike or disapproval of the other's behavior), *negative mind-reading* (i.e., negative inferences and assumptions made by one person about the partner), and *disagreements* (i.e., disagreements said with negative affect or that do not further the discussion). The *constructive problem-solving discussion* comprises all constructive approaches to discussing or solving problems including problem description, constructive solutions that are aimed at solving the conflict being discussed, questions/verbal inquiries towards the partner, and verbal and nonverbal signs of agreement with the partner (Heyman, Eddy, et al., 1995).

Percentage scores were calculated by dividing the frequency of each code by the total number of behaviors coded. Of the total number of behaviors coded, hostility accounted for 1.3% (range: 0%–14.52%), and constructive problem discussion accounted for 41.21% (range: 0%–60%). The relatively low base rate of hostility was expected given prior research showing similar base rates of hostility in lab-based conflict discussion tasks in nondistressed college student dating samples (Downey, Freitas, Michaelis, & Khouri, 1998). There was 87.7% interrater agreement on 25% of the tapes that were double coded. For the sample as a whole, constructive problem solving was negatively associated with hostility ($r = -.39$, $p < .0001$).[2]

Results

Analyses of the daily diary data. The diary data involved a hierarchical structure where participants were nested within couples, and diary days on which conflicts occurred were nested within participants. Subsequently we analyzed the diary data using the mixed procedure in the SAS statistical package, which is based on a hierarchical linear model approach and permits the simultaneous analysis of within- and between-person variation (Kenny, Kashy, & Bolger, 1998). Specifically, we conducted the mixed procedure, predicting relevant conflict outcomes from the level of spontaneous self-distancing participants reported when reflecting on this experience at the end of the conflict day. In all analyses, perceived resolution of the conflict was included as a covariate (which did not moderate any of the results reported below). We treated self-distancing and perceived resolution as fixed effects because of the low rate of conflict occurrence (hence, limited availability of repeated measures data). Degrees of freedom used in significance testing were based on the number of couples who reported at least one conflict ($n = 45$).[3] In preliminary analyses sex did not moderate any of the results reported below, and controlling for global relationship commitment (assessed before the diary study) did not change any of the results. Thus, these variables are not discussed further.

Emotional reactivity to daily conflicts. Mixed analysis was conducted predicting emotional reactivity from self-distancing and perceived resolution of the conflict. The results indicated a significant association between perceived resolution and reactivity ($B = -.41$), $t(43) = 11.02$, $p < .0001$, such that conflicts elicited less emotional reactivity to the extent that they were perceived as having been more resolved. Importantly, emotional reactivity was also predicted by self-distancing ($B = -.07$), $t(43) = 2.08$, $p < .05$, such that the more participants reported analyzing their conflict at the end of the day from a self-distanced perspective, the less upset they felt.

Hostility. We ran similar analyses both on hostility towards partners and on perceived hostility from partners on conflict days. Self-perspective was not significantly associated with either of these variables ($ts < 1.38$, $ps > .17$). Perceived conflict resolution predicted marginally lower levels of perceived hostility ($B = -.08$), $t(43) = 1.81$, $p < .08$, but not enacted hostility ($t < 1$).

Reciprocation of negativity during conflicts. Although the relationship between distancing and hostility towards partners was not significant, we next examined the hypothesis that the dyadic interactions of participants high in self-distancing may be characterized by less escalation of hostility. That is, high self-distancers may respond to perceived hostility from partners with less reciprocation of hostility. To explore this idea, we conducted the mixed procedure on enacted hostility towards partners with perceived hostility from partners, spontaneous self-distancing, and the interaction between perceived hostility and self-distancing entered as predictors. Perceived resolution of the conflict was also entered as a covariate. Predictors were centered on their grand mean. This

[2] Some of the other behavior categories coded by the RMICS occurred extremely infrequently, including psychological abuse (0%), distress-maintaining attributions (0.55%), dysphoria (0.13%), withdrawal (0%), and acceptance (0.40%), and were not analyzed due to their extreme skewness. Other relatively more frequent codes included relationship-enhancing attributions (2.30%), humor (1.25%), and self-focus (2.78%). Self-perspective was not significantly related to the first two codes ($ps > .14$). However, it was negatively associated with self-focus ($B = -.006$), $t(43) = 2.46$, $p < .02$—a code that taps into the degree to which participants focus on their own thoughts, wishes, and beliefs in their conversation and generally include "I" statements (Heyman, Eddy, et al., 1995). Thus, this finding replicates previous research showing that an experimentally manipulated self-distanced perspective reduces the use of first-person pronouns (Ayduk & Kross, 2008).

[3] In preliminary analyses, we first specified the daily predictors as random effects, allowing the lower level within-subject relationship between emotional reactivity and self-distancing to vary among individuals. However, none of the random effects (except for the intercept) were significant (and in some cases could not be computed). This is not very surprising, as the base rate of conflict occurrence was rather low, limiting the availability of repeated measures data. More specifically, of the sample that reported experiencing any conflict during the diary period (86 individuals), 31% reported only one conflict, and 28% reported only two conflicts. Therefore, in the main analyses reported we treated our predictors as fixed effects with the intercept treated as a random effect.

analysis yielded a significant positive relationship between perceived hostility from partners and enacted hostility towards partners ($B = .41$), $t(40) = 6.85$, $p < .0001$, and a significant Perceived Partner Hostility × Self-Distancing interaction ($B = –.083$), $t(40) = 2.43$, $p < .02$. None of the other predictors were significant ($ts < 1$). To further understand the meaning of the significant interaction term, we conducted simple slopes analyses looking at the relationship between perceived hostility and enacted hostility at 1 *SD* below and above the mean on self-perspective (for low and high distancing groups, respectively). This analysis showed that the relationship between perceived and enacted hostility was significantly stronger when self-distancing was low ($B = .74$, $p < .0001$) than when it was high ($B = .59$, $p < .0001$).

Analyses of the lab-based conflict discussion data. To be able to examine relationships between self-distancing and lab-based behavioral measures, we averaged self-distancing ratings from the daily reports across available data for each participant. This variable was not significantly associated with conflict frequency during the diary study, with baseline negative affect at the start of the lab session, or with the total number of behaviors coded during the lab interaction task ($ts < 1$).

Because the conflict discussion data were dyadic, we used the mixed procedure in SAS to predict conflict behavior from participants' level of self-distancing, taking into account the dependence between men and women's data (allowing for dependence between the errors within a couple and for variances to be different between men and women). Because self-distancing was reported only on conflict days, and the number of observations varied among individuals, in preliminary analyses we included the number of conflicts as a predictor in the models tested. Controlling for conflict frequency did not change the results reported below; neither did this variable interact with spontaneous self-distancing in predicting conflict behavior. Hence, it is not discussed further.

Hostile and constructive behaviors during the conflict discussion. Similar to the analysis on emotional reactivity described above, we conducted the mixed procedure in SAS on the hostility and constructive problem discussion codes separately, with self-distancing as the predictor and baseline negative affect as a covariate. Because the outcome variables were percentages, these analyses were conducted on arcsin-transformed data to normalize the distributions (Myers, 1966).

These analyses indicated that hostility approached being predicted by baseline negative affect ($B = .010$), $t(43) = 1.89$, $p < .07$, but not self-distancing ($t < 1$). Constructive problem-solving behavior, in contrast, was significantly predicted by self-distancing, such that distancing was associated with more problem-solving behavior ($B = .013$), $t(43) = 2.02$, $p = .05$. Baseline negative affect was not a significant predictor of problem-solving behavior ($t < 1$).

Reciprocation of negativity during the conflict discussion task. To address the issue of escalation of negativity in conflicts, we also ran analyses on both hostility and constructive behavior codes with self-distancing, partner's level of hostility, and the interaction between self-distancing and partner's hostility as predictors (baseline negative affect was included as a covariate). All predictors were centered on their grand mean.

In both analyses, the interaction term between partners' hostility and participants' self-distancing was in the theoretically expected direction but not significant: hostility, $B = –.16$, $t(43) = 1.55$, $p < .13$; constructive problem discussion, $B = .54$, $t(43) = 1.46$, $p = .15$. Because hostility and constructive behavior codes were negatively correlated as reported before and because the interaction terms reported above mirrored each other, we also ran an analysis on a composite conflict behavior index where hostility and constructive problem-solving behavior were summed after the latter was multiplied by –1. By combining these two measures, we aimed to increase the reliability of our conflict behavior index on which higher scores reflect higher hostility and lower constructive behavior. This analysis revealed the expected interaction between partners' conflict behavior and participants' self-distancing ($B = –.20$), $t(43) = 5.63$, $p = .02$. None of the other predictors were significant. We conducted simple slopes analysis at 1 *SD* below and above the mean on self-distancing to unpack the meaning of this interaction. Among those low in self-distancing (1 *SD* below the mean on self-distancing), partners' hostility and participants' hostility were positively associated ($B = .43$), $t(43) = 2.28$, $p < .03$. In contrast, for people high in self-distancing (1 *SD* above the mean on self-distancing), partners' hostility and participants' hostility were not significantly associated ($B = –.15$, $t < 1$).

Empirical associations with personality measures. Similar to Study 2, we also examined the relationship between self-distancing and trait measures of reappraisal and suppression. Because suppression and reappraisal were significantly related in this sample, these analyses controlled for the effect of one on the other. The results revealed that although the self-distancing–reappraisal relationship was in the theoretically expected direction, it was not statistically significant ($B = .11$), $t(42) = 1.46$, $p = .15$. Self-distancing was not associated with suppression ($B = –.09$, $t = 1$).

In addition, to examine the predictive utility of self-distancing in the presence of trait reappraisal, we reran all of the analyses described in the preceding sections including reappraisal as an additional predictor. These analyses revealed that self-distancing continued to be a significant predictor for the daily diary and lab-based conflict discussion task outcomes reported before when controlling for trait reappraisal (all $ps \leq .059$). Trait reappraisal was not a significant predictor in any of the analyses (all $ps \geq .29$).

Summary and Discussion

Study 3 replicated findings from Studies 1 and 2 and extended them in several ways. First, we replicated the association between spontaneous distancing and emotional reactivity in the context of a daily diary study. Because emotional reactivity was measured fairly closely in time to the actual occurrence of a negative experience, these findings extend the implications of self-distancing from coping with past negative events to coping with ongoing events.

Second, to our knowledge Study 3 is the first to examine the behavioral and interpersonal implications of spontaneous self-distancing. We found that people high in self-distancing used constructive problem-solving strategies to a greater degree than those low in self-distancing. Furthermore, the negative behavior (e.g., hostility, lack of problem-solving behavior) of people low in self-distancing increased linearly with their partners' negative behavior. In other words, participants who were low in spontaneous self-distancing were low in negativity during conflicts if their partners were low, but they were high in negativity if their partners were high. This interactional pattern is indicative of direct recip-

rocation in the couples' behavior. Although such reciprocation may not undermine relationships if both partners' behavior is relatively low in negativity, it may be toxic for the relationship at high levels of negativity, as a tit-for-tat tactic of hostility likely leads to the escalation of the conflict. In contrast, such direct reciprocation happened to a significantly lesser degree in the interactional dynamics of people high in self-distancing. It is important to note that this pattern of findings was found regardless of whether conflict behavior was measured by self-report (during the diary study) or coded from observed behavior by independent raters (during the lab-based conflict discussion task).

One limitation of Study 3 was that our key predictor variable, spontaneous self-distancing, was measured during the diary study portion of the study and hence followed, rather than preceded, the measurement of behavior during the lab-based conflict discussion task. Ideally, self-distancing should have been a prospective predictor of conflict behavior in the lab task. However, the findings from the daily diary study revealed an almost identical set of findings as the results from the conflict discussion task, all of which were predicted by our model. This helps assuage the concern about the order in which the predictor and the outcome variables used in the conflict discussion task analyses were measured.

General Discussion

The present research was performed to address three outstanding issues concerning the role that self-distancing plays in adaptive self-reflection. The first issue we addressed was whether the spontaneous implementation of self-distancing while analyzing negative feelings leads to similar benefits as when this process is experimentally manipulated in the laboratory. In response to this issue, across multiple studies we found that the more participants spontaneously self-distanced while reflecting on feelings surrounding negative experiences, the less reactivity they displayed in the short term. This finding held regardless of whether reactivity was measured using self-report (Studies 1–3) or physiological (Study 2) measures and whether the negative experience had occurred in the past (Studies 1–2) or was ongoing (Study 3). Importantly, the way participants thought about their experience mediated the association between self-distancing and emotional reactivity. That is, people who self-distanced to a greater degree reported lower emotional reactivity at least in part because they recounted their experience less and reconstrued it more. Taken as a whole, these findings demonstrate the external validity of previous experimental findings indicating that self-distancing facilitates adaptive self-reflection whereas self-immersion undermines it.

The second issue addressed by the current work was the relationship between spontaneous self-distancing and avoidance. Across all three studies self-distancing was unrelated to avoidance. This finding held regardless of whether avoidance was measured using self-report (Study 1) or behavioral (Study 2) measures, as well as over both short (Studies 1–2) and long (Study 1) periods of time. Furthermore, the beneficial effects of spontaneous self-distancing were not limited to the short term as they should have been if self-distancing served an avoidance function (Foa & Kozak, 1986). For example, Study 1 demonstrated longitudinal associations between self-distancing and reductions in negative affect and increases in perceived resolution of the experience across an average of 7 weeks. Study 2 further demonstrated that spontaneous self-distancing was associated with lower physiological distress during a recovery period following the analysis of a negative event.

Third, to broaden our understanding of the implications of self-distancing across a wider range of outcomes with real-life significance, the current research extended the implications of spontaneous self-distancing from intrapersonal processes and outcomes (e.g., affect, rumination) to interpersonal processes and behavior (e.g., problem-solving discussion and hostility). In this regard, Study 3 found that spontaneous self-distancing predicted greater engagement in constructive problem-solving behavior and less reciprocation of negative behavior in conflicts with romantic partners. In contrast, rumination has been found to predict impoverished social relationships and impairments in interpersonal problem-solving behavior (Lyubomirsky & Nolen-Hoeksema, 1995; Lyubomirsky, Tucker, Caldwell, & Berg, 1999; Nolen-Hoeksema & Davis, 1999; Schwartz & McCombs, 1995). Thus, findings from Study 3 present additional evidence for the notion that engaging in self-reflection from a self-distanced perspective may be a mechanism that protects against rumination and the interpersonal problems it is associated with.

Finally, a secondary goal of this research was to examine the predictive utility of spontaneous self-distancing in comparison to three theoretically relevant personality traits—rumination, reappraisal, and expressive suppression—and to document the empirical associations it shows with each. In this regard, we found that spontaneous self-distancing correlated negatively with trait rumination. More importantly, spontaneous self-distancing was not redundant with this construct, as it continued to predict key outcomes when rumination was statistically controlled. In contrast, findings from two studies indicated that spontaneous self-distancing was unrelated to trait reappraisal and suppression. Although there is a conceptual relationship between self-distancing and reappraisal, these findings show that they are distinct constructs that should be taken into account on their own right in studies of emotion regulation.

Clinical Implications: Is Spontaneous Self-Distancing Helpful or Harmful?

The present findings provide consistent evidence demonstrating that spontaneous self-distancing facilitates self-reflection in ways that adaptively and consequentially influence people's thoughts, feelings, and behavior in both the short and the long term. However, these findings contradict some theory and research from the clinical domain, which suggests that the process of self-distancing should undermine adaptive self-reflection. For example, patients with PTSD show a tendency to adopt an observer or self-distanced perspective when recalling trauma-related memories, and this tendency has been linked with cognitive and experiential avoidance (e.g., Berntsen, Willert, & Rubin, 2003; McIsaac & Eich, 2004). In a similar vein, social phobics who tend to be chronically high in public self-focus also show a tendency to recall past events from an observer or self-distanced perspective, and this tendency gets even stronger for memories that involve high-anxiety situations (e.g., Coles, Turk, & Heimberg, 2002; Coles, Turk, Heimberg, & Fresco, 2001; also cf. Pineles & Mineka, 2005; for a similar

argument in the context of depression, see Kuyhen & Moulds, 2009). Given these findings on the one hand, and the results reported in the present article on the other, one wonders, is self-distancing helpful or harmful?

One possibility is that the adaptiveness of self-distancing depends on whether one is working with clinical or normal healthy populations, with self-distancing being associated with poor outcomes in the former, but with beneficial outcomes in the latter. However, a closer inspection of the literature reveals that self-distancing has not always been associated with poor outcomes in subclinical or clinical populations (Gruber, Harvey, & Johnson, 2009; Kross & Ayduk, 2009; Lemogne et al., 2006). For example, Kross and Ayduk (2009) showed that affect regulatory benefits of experimentally manipulated self-distancing increase linearly with symptoms of dysphoria. Recently, Gruber et al. (2009) demonstrated that patients diagnosed with bipolar depression who were directed to analyze positive experiences from a self-distanced as opposed to a self-immersed perspective displayed a reduction in psychological and physiological symptoms associated with manic states. Moreover, as reviewed earlier, various forms of empirically validated clinical therapies for depression and PTSD conceptualize the ability to distance from one's feelings as an adaptive quality and incorporate this technique into clinical practice (e.g., Beck, 1970; Ingram & Hollon, 1986; Resick et al., 2008). These findings call for caution against simply assuming that the discrepancy between the present findings and clinical research is a function of the different samples that each literature focuses on.

A second possibility that may help shed light on the conflicting findings regarding the adaptiveness of self-distancing has to do with differences in the way the clinical and the social psychological literatures assess self-distancing. To our knowledge, all studies linking self-distancing with maladaptive outcomes in clinical samples have involved asking participants to indicate whether they adopted an observer perspective only when *recalling* autobiographical memories. In contrast, both the present work and all of our previous studies focus on the type of self-perspective people adopt as they *analyze* their memories. Both theoretically and empirically, substantive differences characterize memory recall and memory elaboration stages of information processing. Memory recall involves retrieving a memory from long-term memory so that it is in awareness and capable of being focused on. Analyzing memories, on the other hand, involves elaborating on the memory that has already been retrieved, for example, by taking into account past, present, and future experiences in order to understand the meaning of one's feelings. Consistent with this view, cognitive neuroscience research indicates that both shared and distinct sets of neural activity underlie these different types of memory operations (e.g., Cabeza, Dolcos, Graham, & Nyberg, 2002; Israel, Seibert, Black, & Brewer, 2009).

As such, the fact that each literature focuses on a different phase of memory processing (retrieval vs. elaboration) may account for the asymmetrical findings produced by these literatures. For example, it is possible that people who self-distance at recall do so in order to completely avoid activating their emotions, leaving them vulnerable to the kinds of long-term problems that prior research has documented. In contrast, people who self-distance while trying to understand their feelings may be recruiting this process to serve a different function—to enable them to reconstrue their feelings without becoming overwhelmed by negative affect. According to this reasoning, whether self-distancing is helpful versus harmful may well depend on why people activate this process (i.e., to avoid focusing on their feelings or to be able to focus on them without becoming overwhelmed) and when they do it (i.e., during recall, during analysis, or during both periods) and should be investigated in future research.

Dispositional Conceptualizations of Self-Distancing

The findings reported by these studies naturally raise the question, Is self-distancing a trait? Although our studies were not designed to directly address this issue, there is some suggestive evidence from these studies that self-distancing operates as a relatively stable personality variable. Specifically, there was reasonable temporal stability in spontaneous self-distancing ratings across a 7-week period, and it was significantly negatively correlated with trait rumination, providing suggestive evidence that self-distancing may be a habitual way of dealing with negative experiences. However, whether people's tendency to spontaneously self-distance is consistent across different types of experiences (e.g., interpersonal vs. noninterpersonal experiences, or past vs. future anticipated experiences), experiences that activate different negative emotions (e.g., anger vs. sadness), or experiences that differ in valence (i.e., negative vs. positive) remains to be examined in future research. We suspect that although there may be mean level differences in the spontaneous use of self-distancing as a regulatory strategy across situations, people may also show characteristic, stable *if–then* profiles (i.e., Person × Situation contingencies) in terms of the situations in which they are more or less likely to adopt this perspective (see Mischel & Ayduk, 2004, for a similar discussion). Addressing these questions is important for future research.

Caveats and Conclusion

Two caveats are necessary before concluding. First, although recounting and reconstrual consistently showed opposite relationships to self-distancing in the present research (i.e., recounting negatively, and reconstrual positively associated with self-distancing), the strength of these relationships varied across studies. Specifically, distancing was significantly related only to recounting in Study 1 and to reconstrual in Study 2. To assess the robustness of these relationships, we computed average effect sizes on the partial correlations between self-distancing and type of thought content (after the effect of memory age and perceived resolution were partialled out) using meta-analytic techniques (Hedges & Olkin, 1985). This analysis revealed that greater self-distancing was significantly related to lower levels of recounting ($r = -.24$, $z = -2.59$, $p < .01$) and to higher levels of reconstruing ($r = .26$, $z = 2.80$, $p < .005$). These findings corroborate our assumptions about the differential relationship self-distancing should show to recounting and reconstrual. Furthermore, that self-distancing was significantly associated with both recounting and reconstrual also suggests that, at least conceptually, the significant mediations observed using the difference score between these indices are unlikely to be simply driven by one type of thought over the other.

Second, because the data are correlational, strong conclusions about the causal effect of spontaneous self-distancing for facilitating adaptive outcomes cannot be made. A similar caveat is in order

for the mediation models presented.[4] However, these limitations should also be evaluated in the backdrop of (a) the remarkable parallels between the present findings and the results obtained in prior experimental work in which self-distancing was manipulated and (b) the longitudinal relationships demonstrated in Study 1.

In conclusion, these caveats notwithstanding, the current research lends support to the idea that the spontaneous utilization of self-distancing in everyday attempts to understand one's emotions led to positive outcomes that are indicative of adaptive self-reflection. As such the current work underscores the importance of further examining the relevance of the findings in clinical samples as well as the existence of dispositional differences in spontaneous distancing.

[4] There is strong theoretical precedence from appraisal theories of emotion (Lazarus, 1991; Schachter & Singer, 1962; C. A. Smith & Ellsworth, 1985) to test the hypothesized causal model where thought content mediates the relationship between self-distancing and emotional reactivity. Nevertheless we also explored reverse mediation models where emotional reactivity mediated the relationship between self-distancing and thought content (the difference between recounting and reconstrual). In both Studies 1 and 2, Sobel tests for reverse mediation were significant ($z = 1.95$, $p = .05$, and $z = 1.97$, $p = .049$, respectively). Next we conducted structural equation modeling to examine whether the theoretically predicted model better fit the data than did the reverse mediation model. In both studies, the theoretical model fit the data well (Study 1, *goodness-of-fit index* [*GFI*] = .99, *root-mean-square error of approximation* [*RMSEA*] = .00, $\chi^2[1, N = 56] = 0.21$, $p = .64$; Study 2, *GFI* = .99, *RMSEA* = .00, $\chi^2[1, N = 67] = 0.38$, $p = .53$), whereas the reverse mediation models did not (Study 1, *GFI* = .98, *RMSEA* = .20, $\chi^2(1, N = 56) = 3.20$, $p = .07$; Study 2, *GFI* = .94, *RMSEA* = .37, $\chi^2[1, N = 67] = 10.13$, $p = .0015$).

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Received October 25, 2009
Revision received October 25, 2009
Accepted October 26, 2009 ■