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Lost Without Each Other: The Influence of Group Identity Loss on the Self-Concept

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Individuals' social relationships influence their self-concepts. Both dyadic and group relationships alter the self during the relationship, and dyadic relationships alter the self when they end. The current research investigated whether collective relationships would do the same across 3 studies. In Study 1, participants imagined losing or retaining group membership. Imagining group membership loss predicted reduced self-concept clarity, with greater group identification resulting in greater reductions. In Studies 2 and 3, participants reported on their psychological identification with a self-chosen group (Study 2) or their university (Study 3) before experiencing a threat to their group membership or not. Participants who experienced a threat to their group membership and were strongly identified with the group reported reduced self-concept clarity (Studies 2 and 3), greater self-concept change (Studies 2 and 3), and reduced self-esteem (Study 3) compared with other participants. Additionally, self-concept change mediated the relationship between the group threat by identification interaction and self-concept clarity.

Keywords: groups, identity loss, self-concept, social identity

Meaningful social relationships are essential to individuals' survival and offer many benefits for their overall well-being (Baumeister & Leary, 1995; Smith, Coats, & Murphy, 2001). Having close relationships with others has been posited as a fundamental human need (Baumeister & Leary, 1995; Maslow, 1943). The relationships that individuals find themselves in profoundly impact not only their well-being, but also their sense of who they are as individuals: their self-concepts (e.g., Baumeister, 1998, 2010; Cooley, 1902; James, 1890). Individuals find themselves in many different types of relationships throughout their lives. Some relationships are dyadic in nature, such as romantic relationships, and others involve membership in important, larger groups. The current research investigated how the loss of a group membership influences individuals' selves. Having a strong group identity not only provides us with positive self-regard, but also reduces uncertainty about the self (Tajfel & Turner, 1979; Hogg, 2007). Group memberships influence individuals' self-concepts while group membership is ongoing (Coats, Smith, Claypool, & Banner, 2000). Previous research has found that not only do romantic relationships play a similar role in the self-concept (e.g., Aron, 2003), but they also produce high levels of identity-relevant disruption and confusion when they end (Slotter, Gardner, & Finkel, 2010). These findings, in conjunction with evidence that people increase group identification in response to threats to self-certainty (Hogg, 2007), lead us to predict that, when individuals lose an important group membership (i.e., a college student graduating from a university in

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which they felt highly identified with) they will also experience disruption and confusion of their self-concepts.

The Social Self

Individuals' self-concepts include their sense of who and what they are (James, 1890) and are multifaceted entities that encompass the traits, physical attributes, material possessions, beliefs, and goals that individuals use to characterize themselves (e.g., Baumeister, 2010; James, 1890; Markus, 1977). Importantly, individuals' self-concepts are created and maintained through individuals' experiences in the world both via their observations of their own behaviors (e.g., Bem, 1972) and via their experiences with others in a variety of social contexts.

One of the primary ways people obtain information and knowledge about the self is through social interactions (e.g., Cooley, 1902; James, 1890; Mead, 1934). Of course, individuals engage in many different types of social interactions on a regular basis. Several distinct lines of research describe the various effects of social interactions on individuals' self-concepts at the levels of the social situation in general, in close dyadic interpersonal relationships, and in larger collective groups (e.g., Baumeister, 1998, 2010; Sedikides & Brewer, 2001). Specifically, individuals' self-concepts appear to be socially influenced at three different levels of analysis: the individual level, the interpersonal level, and the collective level (Sedikides & Brewer, 2001). These three levels of the self all involve a social component. The individual level consists of unique traits that differentiate individuals from other people and is largely constructed from the knowledge individuals gain from observations of their own behavior and from what they glean about themselves in the generalized social sphere, as discussed above.

Collective relationships in particular profoundly influence the self as individuals view the self in the context of membership in social groups that are linked together by common characteristics (Sedikides & Brewer, 2001). Social identity theory, for example, posits that the self-concept is in part defined by one's membership in important social groups (Tajfel & Turner, 1979). The purpose of establishing oneself as a member of a group, then, is to create a positive sense of identity. Thus, individuals use their group memberships to enhance self-esteem, provide identity consistency over time, and provide a sense of meaning to one's existence (Vignoles, Chryssochoou, & Breakwell, 2002). These characteristics also separate social groups. Therefore, the collective level of the self contains aspects of the self-concept that differentiate in-group members from members of out-groups.

Although group members do not necessarily have close, personal relationships with each other, the boundaries of individuals' self-concepts overlap with the typical attributes of the group as a whole and individuals exhibit strong emotional attachments to the groups to which they belong (Coats et al., 2000; Paxton & Moody, 2003; Smith, Murphy, & Coats, 1999). To maximize identification with their group, individuals tend to incorporate attributes of the group into their own personal identities in a process known as self-categorization (Turner & Onorato, 1999). In self-categorization, cognitive representations of the self are defined in relation to a group prototype, or a set of attributes that define a typical member of that group (Hogg, 2006; Hogg & Reid, 2006; Reid & Hogg, 2005). The extent to which self-categorization occurs is dependent on the salience of group experiences, values, and needs at any particular moment (Turner, Oakes, Haslam, & McGarty, 1994). Groups that individuals deem as important to them and central to their identity are generally more accessible than other groups (Turner et al., 1994). Thus, the more central a group is to an individual's identity, the more likely one is to self-categorize.

Expanding on social identity theory, Hogg's (2007) uncertainty-identity theory demonstrates how uncertain perceptions, attitudes, and feelings about the self motivate individuals to reduce these feelings of subjective uncertainty. One of the most crucial ways in which we reduce uncertainty is to increase identification with a particular social group. According to Hogg, this reduction in uncertainty occurs through self-categorization—the closer that we perceive ourselves to be to the group prototype, the more stable and predictable our sense of self is. Furthermore, the more salient and distinct a particular group identity is compared with other identities, the more likely one is to identify with that group identity in response to uncertainty

(Grant & Hogg, 2012). However, to date little research exists examining whether the relationship between uncertainty and group identification is bidirectional—that is, whether threatening or removing membership in a central group identity results in increased uncertainty and decreased clarity of the self. If individuals seek group membership in times of uncertainty, then one would anticipate similar feelings of distress and uncertainty if a group membership (the source of clear perceptions of the self) is threatened.

Additionally, similar to previous research examining the impact of dyadic relationships upon the self (e.g., Aron et al., 1991; Slotter & Gardner, 2009), individuals' self-concepts actually expand to include traits and attributes associated with the group, creating overlapping mental representations of the self and an in-group (Coats et al., 2000; Pickett, Bonner, & Coleman, 2002). For example, self-descriptive judgments on a reaction time (RT) task were faster for traits and attitudes that matched between the self and a valued in-group compared with those that did not match (Smith & Henry, 1996). Research has also found a positive correlation between traits that are deemed as characteristic of an important group membership and traits that are seen to increase self-esteem and identity continuity, suggesting that group centrality is an important factor in the integration of a group identity into the self-concept (Vignoles, Regalia, Manzi, Golledge, & Scabini, 2006). Importantly, the impact of group membership on individuals' selves benefits individuals by meeting their need to feel socially connected to others and is enhanced to the degree that the group is psychologically important to the individual (Baumeister & Leary, 1995; Paxton & Moody, 2003).

Social Relationship Loss and the Self

Given the influence that social relationships have on individuals' self-concepts, what might happen to the self-concept if this important source of self-knowledge disappeared? One source of information about the effects of social loss on the self-concept is research on dyadic relationships. Research in this domain has found that loss of a romantic relationship results in lowered feelings of self-esteem or self-worth (e.g., Park, Sanchez, & Brynildsen, 2011) and changes to the content and certainty of individuals' selves (Lewandowski, Aron, Bassis, & Kunak, 2006; Slotter et al., 2010). Slotter and colleagues (2010) found that individuals who ended a romantic relationship also expressed reduced self-concept clarity in addition to changes in the self-concept. Self-concept clarity refers to the coherence and consistency that individuals subjectively perceive their self-concepts to possess (e.g., Campbell, 1990).

Self-concept clarity is critical to individuals' well-being because of its strong relationship to self-esteem. People with high self-esteem tend to have clear, well-articulated, positive thoughts about themselves. Also, those with higher levels of self-concept clarity tend to score more favorably on various measures of psychological adjustment and well-being. For example, individuals who score high on self-concept clarity exhibit lower levels of anger, anxiety, and depression than those with low self-concept clarity scores (Bigler, Neimeyer, & Brown, 2001; Bond, Ruaro, & Wingrove, 2006; Wu, 2009). Hence, the psychological health of individuals is somewhat dependent on the extent to which they have a clear, consistent view of their self-concept.

Slotter and colleagues (2010) demonstrated that greater change to the content of the self-concept after a romantic breakup predicted reduced current levels of self-concept clarity—mediating the direct relationship between breakup and reduced self-concept clarity. Additionally, individuals' reported greater self-change and less self-concept clarity to the extent that they were highly committed to their relationship— that is, to the extent their relationship was very important to them (Slotter et al., 2010). Additional recent research provides also has demonstrated that, generally speaking, exiting many types of social roles is more detrimental to the self-concept than entering into new roles (Light & Visser, 2013). Light and Visser's (2013) work demonstrated that a range of transitions that involve exiting a particular role, including the loss of relationships such as romantic relationships, predicted reduced self-concept clarity and self-esteem. Furthermore, the impact of role exits on the self appeared to operate via alterations to individuals' behavioral routines as well as via increased feelings of loneliness.

This existing work, however, does not examine whether types of relational losses besides romantic relationship loss also impact individuals' identities in the same way as the relational loss of romantic breakup. Role exits can reflect a relational loss, but can also reflect life changes that have nothing to do with a particular type of relationship. For example, role exits can include relational losses such as divorce, but also include more general transitions such as losing a job. Thus, the present research sought to expand the existing knowledge by examining whether loss of a collective relationship impact individuals' identities—that is, whether individuals also experience changes to the self-concept when they lose a group membership. Additionally, previous research has not examined how the self-held importance of a group membership, or centrality of the membership to the individuals' self, might influence how detrimental a collectively oriented role transition is to an individual.

Research Overview and Hypotheses

Group memberships provide individuals with important information about their selves, especially to the extent that individuals strongly identify with the group or view the group as important to them (e.g., Paxton & Moody, 2003). Thus, when a group membership is lost, individuals lose an important source of self-knowledge. As with romantic relationships, this loss should predict disruption to and confusion about the self. Thus, we predicted that, when threatened with the loss of a group membership, individuals would report reduced positivity of the self (i.e., self-esteem), changes in the content of their self-concept, and reduced self-concept clarity. These effects should be stronger to the extent that individuals strongly identified with the group. Being strongly identified with a group indicates greater psychological commitment to that group and commitment in romantic dyads predicts greater disruption to the self-concept after a relational loss (Slotter et al., 2010). Thus, being strongly identified with one's group should also predict greater disruption to the self-concept in the face of threatened group memberships. In line with previous work (Slotter et al., 2010), we also predicted that change in the content of the self-concept would mediate the direct relationship between the threat of group loss among highly identified individuals and reduced self-concept clarity. We tested these hypotheses across three studies. Across all studies we examined how anticipating the loss of a collective identity would predict individuals' current views of themselves.

Study 1

Study 1 tested our hypothesis that individuals' self-concepts would be impacted by the threat of the loss of an important group. Participants reported on their identification with a group of which they were a member before imagining themselves losing the group membership, remaining a member of the group, or a control scenario. They then wrote about how they anticipated being impacted by the event they imagined. Coders assessed participants' self-concept clarity from their essays.

Method

Participants. Eighty-seven nonstudent participants took part in the current study (33 men, 54 women; M_{age} = 34.31, SD = 11.65) as part of Amazon.com's "Mechanical Turk" interface (or MTurk). Mechanical Turk is a website where over 100,000 users ("workers") from all over the world complete tens of thousands of tasks daily (Pontin, 2007). MTurk samples are slightly more representative of the U.S. population than standard American samples and significantly more diverse than typical American college samples (Buhrmester, Kwang, & Gosling, 2011). Workers browse the tasks, choose which ones to complete, and receive payment after successfully completing them. Participants in the current study earned $0.25 for their time.[1] Participants in the current study were all United States residents and were primarily Caucasian (83.3%).

Self-report measures.

Group identification scale. Participants completed a 12-item scale assessing their psychological identification as a member of a group (Cameron, 2004; see also Giguere & Lalonde, 2009; Sahdra & Ross, 2007). This scale in-

[1] One hundred potential participants began the current study on Mturk. Thirteen of them did not complete any measures in the study before exiting, and thus are not reported here because they contributed no data.

cludes items such as, *I feel strong ties to other members of my group* (All items: 1 = *strongly disagree,* 7 = *strongly agree;* $\alpha = .89$). An average composite of all items was computed with higher scores indicating greater identification with the group and therefore greater importance of the group to the individual.

Coded measures.

Self-concept clarity. From the essays that participants wrote (see below), two coders, who were blind to study hypotheses, rated participants' current level of self-concept clarity (ICC = 0.72). Specifically, coders were asked to rate how certain participants were of their self-concept/who they were (−3 = *extremely uncertain,* 3 = *extremely certain*). Both coders rated all essays based on explicit statements that participants made. For example, a participant who received an average score of −2.32 made statements such as, *I stopped volunteering at the animal shelter, and now I don't really know how I'd spend my time. It's such a big part of who I am, I'd be lost without it.* Disagreements between coders were resolved by discussion during weekly coding meetings.

Procedure. Participants completed the study in a single online session. On beginning their session, participants were asked to think about a group of which they were a member. Participants could think of any group they wanted, and group type was coded after data collection. The most commonly considered groups were social recreation groups (i.e., crew team, book clubs, $n = 61$); other groups included political groups (i.e., young democrats, etc., $n = 12$) and volunteer, activism, or service groups (i.e., LGBT awareness, parent teacher's associations, etc., $n = 14$). No participants generated a group that they might find especially difficult to imagine losing (i.e., a family group membership). Participants then completed the group identification scale, described above, with regard to the group that they were considering.

Next, participants were randomly assigned to one of three experimental conditions. In the group threat condition, participants were asked to imagine that, as of that day, they could no longer be a member of the group that they had chosen to think about. In the group confirmation condition, participants were asked to imagine themselves continuing as members of the group they had chosen to think about for the foreseeable future. In the control condition, participants were asked to write about their most recent trip to the grocery store. Participants were allowed to write for as long as they wanted about how they would feel and what they would think in the scenario they were given.[2] From their essays, independent coders rated participants' self-concept clarity.

Results and Discussion

To test our hypothesis that the threat of losing a group membership with which one was highly identified would predict alterations in individual self-concepts, we conducted a multilevel regression model predicting participants' coded self-concept clarity ($M = 0$, $SD = 1$) from assigned condition (entered as a categorical variable, *Threat* = −1, *Confirmation* = 1, *Control* = 0), group identification (standardized $M = 0$, $SD = 1$), and their interaction. A multilevel modeling approach was necessary because participants' self-concept clarity codes were nested within coder and thus violated assumptions of independence (e.g., Singer & Willett, 2003).

A significant main effect of condition emerged such that participants expressed less self-concept clarity in the threat condition, compared with the other two, $\beta = -1.09$, $t(85) = -5.66$, $p < .001$. No significant main effect of group identification emerged, $\beta = -0.06$, $t(85) = -0.79$, $p = .42$. As predicted, the main effect was qualified by a significant interaction between condition and group identification (see Figure 1), $\beta = 0.20$, $t(85) = 2.08$, $p = .03$.[3]

To clarify the nature of this interaction, we examined participants' coded self-concept clarity across conditions as a function of their group identification. Group identification did not predict self-concept clarity in the confirmation, $\beta = 0.11$, $t(28) = 0.62$, $p = .54$, or control conditions, $\beta = 0.02$, $t(28) = 0.21$, $p = .79$; however, in the threat condition, greater group identification predicted less coded self-concept

[2] Participants wrote for 75.32 seconds on average ($SD = 30.21$), and how long participants wrote did not vary across condition. Similarly, participants wrote 123.34 words on average ($SD = 35.12$), and word count did not vary across condition.

[3] In all of the present studies, we reran all of our central analyses including participant gender (main effect and all interactions) in our model. Gender contributed neither a main effect nor any moderational effects to our analyses.

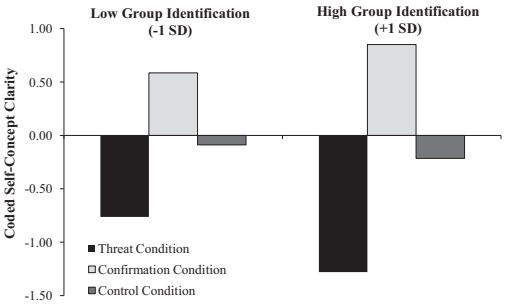

Figure 1. Study 1: Coded self-concept clarity as a function of group condition and identification.

clarity, $\beta = -0.30$, $t(31) = -2.00$, $p = .05$. Similarly, the effect of condition on self-concept clarity was significant across both high (+1 *SD*), $\beta = 1.07$, $t(85) = 8.04$, $p < .001$, and low (−1 *SD*), $\beta = 0.67$, $t(85) = 4.92$, $p < .001$, levels of group identification; however, the effect of condition was stronger for participants who were more, versus less, identified with their chosen group. Taken together, these results suggest that individuals' current views of their self-concepts are impacted by anticipating losing an important group. Study 1 provided initial insight into how individuals respond to the threat of group membership loss, and has the advantage of doing so with varied naturalistic groups that individuals actually belonged to.

Study 2

Study 2 sought to conceptually replicate the effects of Study 1; however, Study 2 expanded on the results of Study 1 by using a self-report, rather than coded, measure of self-concept clarity and a slightly different measure of group importance to the self. Specifically, Study 2 focused on the extent to which the group was integrated into the self-concept. Moreover, Study 2 expanded upon the previous study to assess an additional aspect of the self-concept that should be impacted by the threat of losing an important group membership—the content of the self-concept— in addition to self-concept clarity. Finally, Study 2 sought to examine a potential mechanism by which the threat of losing an important group might reduce individuals' self-concept clarity.

Method

Participants. Ninety-five nonstudent participants took part in the current study (41 men, 53 women, 2 unreported; $M_{age} = 36.52$, $SD = 13.26$) as part of Amazon.com's "Mechanical Turk" interface (or MTurk). Participants in the current study earned $0.25 for their time.[4] As in Study 1, participants in the current study were all United States residents and were primarily Caucasian (85.2%).

Self-report measures.

Group identification. Participants completed a 1-item scale assessing their psychological identification as a member of a group. Specifically, the group identification measure assessed the extent to which participants viewed their chosen group as an integral part of their self-concept (originally called the Inclusion of Ingroup in the Self; Tropp & Wright, 2001). This measure, adapted from the Inclusion of Other in Self scale (Aron et al., 1991), presents participants with seven circles that vary in their degree of overlap. Participants are asked to select which of the circles, from 1 to 7, best represents their relationship with their group. Higher scores on this item reflect a greater degree of overlap between the self and the group and a higher degree of the group's psychological importance to the individual.

Self-concept change. Participants completed a measure, adapted from Slotter et al. (2010), assessing the changes in self-concept that the participant projected occurring if they were to ever lose membership in the group they generated. Participants indicated the extent to which they believed five different domains (appearance, activities, social circle, future plans, values) would change (e.g., *If I were to no longer be part of this group, my values and beliefs will change*; 1 = *not at all*, 7 = *extremely;* $\alpha = .75$). An average composite of all items was computed with higher scores indicating greater anticipated self-change.

[4] One hundred twenty-five potential participants began the current study on Mturk. Seventeen of them did not complete any measures in the study before exiting, and thus are not reported here as they contributed no data. Thirteen other potential participants provided demographic information but did not provide a group for use in the study and thus are not reported here as they contributed no usable data.

Self-concept clarity. Participants completed a 12-item scale, designed by Campbell et al. (1996), assessing the extent to which participants felt certain that they possessed a clear and stable self-concept, (e.g., *In general, I have a clear sense of who I am and what I am*; 1 = *strongly disagree*, 7 = *strongly agree;* α = .93). An average composite of all items was computed with higher scores indicating greater self-concept clarity.

Procedure. Participants completed the study in a single online session. On beginning their session, participants were asked to think about a group of which they were a member. Participants could think of any group they wanted, and as in Study 1, the most commonly considered groups were social recreation groups (n = 72), and other groups included political groups (n = 9), and volunteer, activism, or service groups (n = 14). No participants generated groups that would be especially difficult to imagine losing (i.e., a family group membership). Participants then completed the group identification measure, described above, with regard to the group that they were considering.

Next, participants were randomly assigned to one of two experimental conditions, identical to those used in Study 1; the group confirmation condition was dropped from Study 2.[5] In the group threat condition, participants were asked to imagine that, as of that day, they could no longer be a member of the group that they had chosen to think about. In the control, or no threat condition, participants were asked to write about their most recent trip to the grocery store. Participants were allowed to write for as long as they wanted about how they would feel and what they would think in the scenario they were given.[6] They then completed the measure of anticipated self-concept change, followed by the measure of current self-concept clarity.

Results and Discussion

To test our hypothesis that the threat of losing a group membership which one had included as part of one's self-concept would predict alterations in individuals' self-concepts, we conducted a series of independent regression models predicting participants' self-concept change, and self-concept clarity (all standardized M = 0, SD = 1), from assigned condition (entered as a categorical variable, *threat* = 1, *no threat* = 0), inclusion of the group in the self (M = 0, SD = 1), and their interaction.

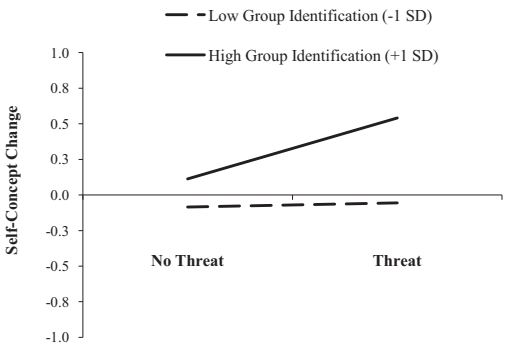

Figure 2. Study 2: Self-concept change as a function of group condition and identification.

Self-concept change. When examining participants' projected self-concept change, no significant main effect of group identification, $\beta = -.10$, $t(91) = -.71$, $p = .48$, emerged. A significant main effect of condition emerged such that participants in the group threat condition reported more projected self-change, $\beta = .46$, $t(91) = 2.31$, $p < .05$. However, as predicted, this main effect was qualified by a significant interaction between condition and group identification, $\beta = .40$, $t(91) = 2.01$, $p = .04$ (see Figure 2). We examined the simple effect of threat condition for individuals who were relatively high (+1 *SD*) versus relatively low (−1 *SD*) with regard to the extent to which they included their group as part of their self-concept. As predicted, threat condition did not exert a significant effect on participants' self-concept change scores if they were low on

[5] In Study 2, we originally attempted to manipulate group identification as well. This manipulation failed to affect the group identification scale, which was originally included in the study as a manipulation check. However, the continuous scale, as reported in the text, did interact with our successful manipulation of group loss threat to predict self-concept change and clarity. No systematic differences in participants were observed across the levels of the failed manipulation. The failed manipulation asked participants to complete a fake scale regarding their feelings toward their group, and they were given fabricated feedback that they were either strongly, or not strongly, identified with the group.

[6] Writing time for the essay was not recorded in this study; however, participants wrote an average of 124.31 words (SD = 25.42), and essay word count did not vary across condition.

group identification, β = .06, $t(91) = .21$, $p = .83$. However, participants who were high on group identification perceived that they would change to a greater extent if they lost their group membership if they were in the threat condition compared to the no threat condition, β = .86, $t(91) = 3.05$ $p = .007$.

Self-concept clarity. When examining participants' reports of self-concept clarity, no significant main effects of either threat/no threat condition, β = −.28, $t(91) = -1.38$, $p = .17$ or group identification, β = .20, $t(91) = 1.39$, $p = .17$, emerged. However, as predicted, a significant interaction between condition and group identification emerged, β = −.51, $t(91) = -2.53$, $p = .01$ (see Figure 3). We examined the simple effect of threat condition for individuals who were relatively high (+1 *SD*) versus relatively low (−1 *SD*) with regard to the extent to which they included their group as part of their self-concept. As predicted, threat condition did not exert a significant effect on participants' self-concept clarity scores if they were low on group identification, β = .23, $t(91) = .82$, $p = .42$. However, participants who were high on group identification had lower self-concept clarity scores if they were in the threat condition compared to the no threat condition, β = −.78, $t(91) = -2.76$ $p = .01$.

Mediated moderation analysis. We next examined whether anticipated change in the content of participants' self-concepts could partially account for the relationship between receiving a threat to a group identity and reduced self-concept clarity. Thus, we examined whether the effect of our key interaction between threat condition and group identification on self-concept clarity was mediated by forecasted self-change (e.g., Edwards & Lambert, 2007; Muller, Judd, & Yzerbyt, 2005). To test this hypothesized mediational pathway, we employed modified techniques advocated by Baron and Kenny (1986), combined with a biased and accelerated bootstrapping approach based on 5,000 resamples. Having already established that the interaction between threat condition and group identification predicted both our dependent variable of self-concept clarity and our proposed mediator of self-change, we entered the threat condition by group identification interaction, and self-change simultaneously into a regression predicting self-concept clarity. The main effects of threat condition and group identification were also entered as covariates (e.g., Muller et al., 2005). Threat condition was dummy coded (*threat* = 1, *no threat* = 0) and all other variables were standardized ($M = 0$, $SD = 1$).

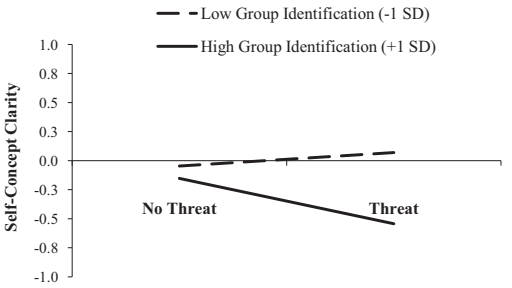

Figure 3. Study 2: Self-concept clarity reported as a function of group condition and identification.

As predicted, greater self-change predicted more reduced self-concept clarity, β = −.33, $t(91) = -3.33$, $p < .01$, and the addition of forecasted self-change to the model reduced the effect of the threat condition by group identification interaction to marginal significance, β = −.19, $t(91) = -1.92$, $p = .06$. Additionally, using Preacher and Hayes' (2004) SPSS macro for testing mediation, our bootstrapping analysis revealed a total indirect effect of condition with a 95% BCa (bias corrected and accelerated) bootstrap confidence interval of −0.17 to −0.003 (based on 5000 resamples). Zero falls outside of this confidence interval, indicating significant mediation at the $p < .05$ level. Taken together the results of Study 2 demonstrated that the content and clarity of individuals' self-concepts are influenced by anticipating a threat to an important group membership. Additionally, and replicating previous research (Slotter et al., 2010), anticipated change in the content of individuals' selves may serves as a mechanism for the relationship between experiencing a threat to an important group and reduced self-concept clarity.

Study 3

Study 3 sought to replicate the results of Study 2; however, Study 3 expanded on the results of the previous studies by manipulating the threat of group loss more precisely using one group membership—a valued identity as a

student at a particular university—rather than simply asking participants to imagine losing any group membership in their lives. Study 3 also expanded on the previous studies to assess an additional aspect of the self-concept that should be impacted by the threat of losing an important group membership—the positivity of the self—in addition to content of the self and self-concept clarity. Finally, as in Study 2, Study 3 sought to examine a potential mechanism by which the threat of losing an important group might reduce individuals' self-concept clarity.

Method

Participants. Eighty-five undergraduate students (25 men, 60 women; M_{age} = 20.71, SD = .74) at Villanova University participated in the study. Only students who reported that they were juniors (n = 58) or seniors (n = 27) and did not transfer to the university from elsewhere were eligible to participate in the study. All participants had lived on campus for at least two years, with most having lived on campus for three years (82%). Sixty participants were recruited from introductory psychology classes and compensated with 0.5 hours of research credit for 30 minutes of their time. The remaining participants were recruited using flyers placed around the campus and electronic advertising and were compensated with $5.00 for 30 minutes of their time.

Self-report measures.

University group identification. Participants completed the same measure of group identification used in Study 1. This measure was adapted to refer to participants' Villanova University student identity (e.g., *I feel strong ties to other Villanova University students*; All items: 1 = *strongly disagree*, 7 = *strongly agree;* α = .91). An average composite of all items was computed with higher scores indicating higher levels of group identification.

Self-esteem. Participants completed the 10-item Rosenberg's (1965) self-esteem scale assessing the extent to which participants felt positively about the self, (e.g., *I take a positive attitude toward myself*; 1 = *strongly disagree*, 7 = *strongly agree*; α = .84). An average composite of all items was computed with higher scores indicating greater self-esteem.

Self-concept change. Participants completed a slightly altered version of the self-change measure, adapted from Slotter et al. (2010), used in Study 2. Participants indicated the extent to which they anticipated five different domains (appearance, activities, social circle, future plans, values) would change after they graduated from their university, (e.g., *After I graduate from Villanova, my values and beliefs will change*; 1 = *not at all*, 7 = *extremely*). In Study 3, the scale exhibited somewhat low reliability (α = .58), but all items loaded onto a single factor in a factor analysis (Principal axis approach with varimax rotation; single factor eigenvalue = 1.87, all other eigenvalues <1.00). An average composite of all items was computed with higher scores indicating greater anticipated self-change.

Self-concept clarity. Participants completed the 12-item self-concept clarity scale, designed by Campbell et al. (1996), used in Study 2, (e.g., *In general, I have a clear sense of who I am and what I am*; 1 = *strongly disagree*, 7 = *strongly agree;* α = .88). An average composite of all items was computed with higher scores indicating greater self-concept clarity.

Procedure. Participants completed all aspects of the study via a computer in a single experimental session. On their arrival to the laboratory, participants first completed a few demographic questions designed to confirm that they were juniors or seniors and did not transfer to Villanova from another college. Next they completed the Villanova group identification scale, which was used to establish the strength of participants' identification with Villanova.

Participants were randomly assigned to the threat condition or the no threat condition. Participants in the threat condition were asked to write an essay about how graduating means they would no longer have the Villanova group identity. They read the following prompt:

> When you graduate from Villanova, your status as a Villanova student will no longer be an important part of your identity. Although being a Villanova student may have once been important to you, after you graduate, this aspect of your identity will no longer exist. For the next 3 minutes, please write about how being a Villanova student will no longer be part of your identity after you graduate.

Participants in the no threat condition wrote about how they would continue to have the

Villanova group identity as an alumnus of the university. Participants in this condition read the following prompt:

> When you graduate from Villanova, your status as a Villanova student will continue to be part of your identity. Although you will graduate, you will still maintain the status of a Villanova alumnus. Research has shown that individuals with close ties to an important group maintain that identity, even after they are no longer part of that group. For the next 3 minutes, please write about how being a Villanova student will continue to be part of your identity.

Following their assigned prompt, participants were asked to write for 3 minutes. After the essay task, participants completed the survey measures described above: current self-esteem, forecasted self-concept change, and current self-concept clarity.

Results and Discussion

To test our hypothesis that the threat of losing a group membership with which one was highly identified would predict alterations in individuals' self-concepts, we conducted a series of independent regression models predicting participants' self-esteem, self-concept change, and self-concept clarity (all standardized $M = 0$, $SD = 1$), from assigned condition (entered as a categorical variable, *threat* = 1, *no threat* = 0), Villanova group identification ($M = 0$, $SD = 1$), and their interaction.

Self-esteem. With regard to participants' reports of self-esteem, no significant main effects of either threat/no threat condition, $\beta = -.19$, $t(81) = -1.82$, $p = .07$ or Villanova group identification, $\beta = .02$, $t(81) = .16$, $p = .87$, emerged. However, as predicted, a significant interaction between condition and Villanova group identification emerged, $\beta = -.34$, $t(81) = -3.33$, $p < .001$ (see Figure 4). We examined the simple effect of threat condition for individuals who were relatively high (+1 *SD*) versus relatively low (−1 *SD*) in their Villanova group identification. As predicted, threat condition did not exert a significant effect on participants' self-esteem if they were weakly identified with Villanova, $\beta = .16$, $t(81) = 1.08$, $p = .28$. However, participants who were strongly identified with Villanova had lower self-esteem scores if they were in the threat condition compared to the no threat condition, $\beta = -.53$, $t(81) = -3.65$, $p < .001$.

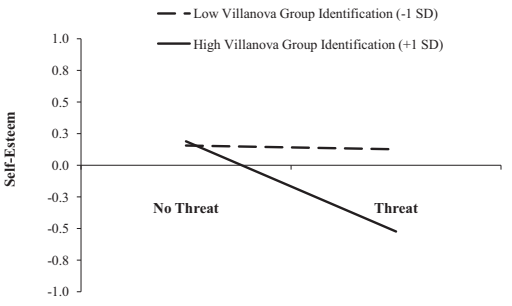

Figure 4. Study 3: Self-esteem reported as a function of group condition and identification.

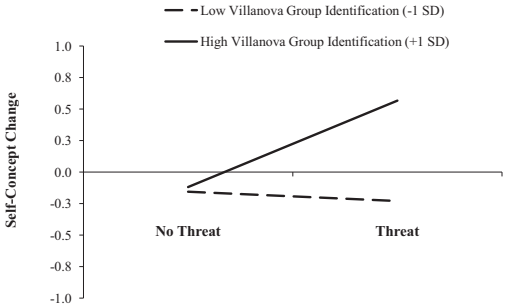

Figure 5. Study 3: Self-change reported as a function of group condition and identification.

Self-concept change. When examining participants' anticipated self-concept change after graduating, no significant main effects of either threat/no threat condition, $\beta = .15$, $t(81) = 1.52$, $p = .13$ or Villanova group identification, $\beta = .02$, $t(81) = .17$, $p = .86$, emerged. However, as predicted, a significant interaction between condition and Villanova group identification emerged, $\beta = .38$, $t(81) = 3.75$, $p < .001$ (see Figure 5). We examined the simple effect of threat condition for individuals who were relatively high (+1 *SD*) versus relatively low (−1 *SD*) in their Villanova group identification. As predicted, threat condition did not exert a significant effect on participants' self-concept change scores if they were weakly identified with Villanova, $\beta = -.23$, $t(81) = -1.59$, $p = .12$. However, participants who were strongly identified with Villanova perceived that they would change to a greater extent after graduation if they were in the threat condition compared to the no threat condition, $\beta = .54$, $t(81) = 3.72$, $p < .001$.

Self-concept clarity. When examining participants' reports of self-concept clarity, no significant main effects of either threat/no threat condition, $\beta = -.14$, $t(81) = -1.32$, $p = .19$ or Villanova group identification, $\beta = -.15$, $t(81) = -1.42$, $p = .16$, emerged. However, as predicted, a significant interaction between condition and Villanova group identification emerged, $\beta = -.26$, $t(81) = -2.49$, $p = .02$ (see Figure 6). We examined the simple effect of threat condition for individuals who were relatively high (+1 *SD*) versus relatively low (−1 *SD*) in their Villanova group identification. As predicted, threat condition did not exert a significant effect on participants' self-concept clarity scores if they were weakly identified with Villanova, $\beta = .12$, $t(81) = .84$, $p = .41$. However, participants who were strongly identified with Villanova had lower self-concept clarity scores if they were in the threat condition compared to the no threat condition, $\beta = -.40$, $t(81) = -2.69$, $p = .01$.

Mediated moderation analysis. We next examined whether anticipated change in the content of participants' self-concepts would mediate the relationship between receiving a threat to their valued group identity and reduced self-concept clarity. Thus, we examined whether the effect of our key interaction between threat condition and Villanova group identification on self-concept clarity was mediated by forecasted self-change (e.g., Edwards & Lambert, 2007; Muller et al., 2005). We employed the same analytic approach used in Study 2.

As predicted, greater forecasted self-change predicted more reduced self-concept clarity, $\beta = -.38$, $t(81) = -3.75$, $p = .002$, and the addition of self-change to the model reduced the effect of the threat condition by Villanova group identification interaction to nonsignificance, $\beta = -.14$, $t(81) = -1.28$, $p = .20$. Additionally, using Preacher and Hayes' (2004) SPSS macro for testing mediation, our bootstrapping analysis revealed a total indirect effect of condition with a 95% BCa (bias corrected and accelerated) bootstrap confidence interval of −0.26 to −0.03 (based on 5000 resamples). Zero falls outside of this confidence interval, indicating significant mediation at the $p < .05$ level. Taken together the results of Study 3 demonstrated that the positivity, content, and clarity of individuals' self-concepts are influenced by perceiving a threat to an important group membership. Additionally, as in Study 2, anticipated change in the content of individuals' selves appears to be a potential mechanism for the relationship between experiencing a threat to an important group and reduced self-concept clarity.

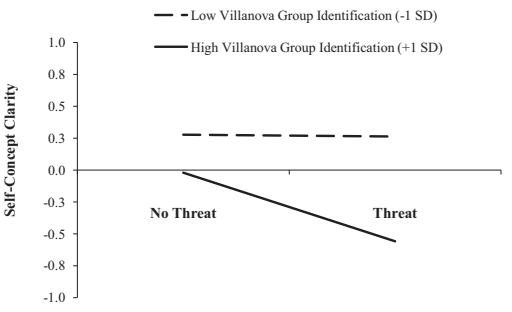

Figure 6. Study 3: Self-concept clarity reported as a function of group condition and identification.

General Discussion

In the current research, we sought to examine the potential self-relevant consequences of losing membership in an important group. We predicted that individuals who were strongly identified with a group and asked to consider the threatening notion that their group would no longer be part of their identity would experience less self-esteem, greater self-concept change, and less self-concept clarity, compared with individuals who had not had an important group membership threatened. We also predicted that anticipated self-change would mediate the relationship between threats to individuals' group memberships and reduced self-concept clarity. Data across three studies converged to support our hypotheses.

In Study 1, participants who imagined losing a group membership that they were strongly identified with predicted objective coders rating less self-concept clarity in a subsequent essay task. In Study 2, participants who imagined losing a group membership that they viewed as part of their self-concept reported that they thought their selves would change if they actually lost membership in the group and reported less current self-concept clarity. In Study 3, participants who were threatened with the loss

of a university group membership, and who were highly identified with their university, reported less current self-esteem, that they thought their selves would change extensively after graduation, and reported less current self-concept clarity. Importantly, in Studies 2 and 3, anticipated self-change mediated the relationship between the threat of group membership loss and reduced self-concept clarity. This mediational pathway mimics a similar pathway found after the loss of a dyadic relationship, specifically a romantic relationship, suggesting that the loss of membership in a group that is important to the self may impact the content and structure of the self-concept similarly to the loss of a dyadic relationship that is important to the self.

Implications and Future Directions

Our results represent the first empirical test of the idea that losing an important group membership may affect individuals' perceptions of themselves. Specifically, we found support for the idea that, when an important group membership is threatened, people consider changing the beliefs and behaviors that make them who they are, report a less clear sense of who they are, and report lower self-esteem. This work expands upon existing research in three key ways. First, the work goes beyond research on general role exits and the self, by demonstrating that the loss of a specific group-based relationship impacts self-content, feeling, and clarity. Although relationship losses were assumed by previous work to be an instance of a role exit, and certainly this is a theoretically sound idea, the present work explicitly demonstrates that group loss, in addition to romantic relationship loss, is a specific type of role loss.

Second, this work demonstrates that the loss of a dyadic relationship and the loss of a collective relationship influence individuals' selves similarly. Indeed, the self change measure used in the current studies was directly adapted from work on romantic relationship dissolution and the self (Slotter et al., 2010), so we are seeing endorsements of self change on the same scale items after the loss of a group membership and after the loss of a romantic relationship. Similar to individuals defining themselves based on their relationship with a romantic partner, the present research demonstrated that individuals also define who they are based on their group memberships and, much like a romantic breakup, threatening the existence of an important group membership impacts individuals' self-concepts. Thus, one might argue, social relationships that impact individuals' self-concepts appear to exert similar influences regardless of the type of relationship in question.

Third, the current research demonstrated that the importance of a given group to an individual was a crucial moderator of the impact losing that group had on the person. If individuals were not invested in their groups and did not view them as important to them, they were not bothered by the loss of the collective relationship and their self-concept remained relatively unfazed. The previous work on romantic relationship loss and role exits more generally had not directly addressed this point with regard to collective identities. That said, the previous work on romantic relationship loss (Slotter et al., 2010) has demonstrated that individuals' projected self-loss after an imagined relationship dissolution is increased to the extent that their dyadic relationship was highly important to them (i.e., they were very committed to their relationship). The present work is the first to apply this idea to collective identities.

The current research has important implications for individuals' sense of identity in an increasingly mobile and transient society. In today's world, individuals graduate from high school and college, change jobs, move cities, and may change other group memberships throughout their lives. How individuals manage these fluctuating group memberships with regard to their identity, with a specific focus on well-being, is an important avenue for future research. Specifically, research should investigate how the self-relevant changes associated with group membership loss may impact well-being. Existing research examining the loss of a romantic relationship has demonstrated that reduced self-concept clarity is associated with elevated negative affect. Perhaps the same is true for the loss of a group membership.

Along similar lines, different individuals may manage the loss of group memberships differently. Some individuals may try to remember, or even maintain, the group membership via social networking sites such as Facebook. Other individuals may try to form new group-related identities to replace the lost one, whereas still others may simply attempt to cope directly with the loss of their group identity. Future research should inves-

tigate the individual differences, in particular individual differences that might differ systematically across cultures, such as the extent of an individual's interdependent self-construal (Markus & Kitayama, 1991). These might predict differences in both how affected individuals are by the loss of a group membership, as well as how they cope with that loss. Investigating whether the loss of different types of groups is differentially impactful to individuals would also be an important avenue for future research. For example, would our effects generalize to groups that are harder for individuals to exit, such as ascribed, rather than chosen groups? Along similar lines, previous work suggests that individuals tend to be highly invested in groups that are very cohesive/entitative, and that are characterized by high levels of intimacy (e.g., Crawford & Salaman, 2012; Lickel et al., 2000). Perhaps losing a highly entitative or intimacy-driven group membership would be especially impactful for individuals' selves. Indeed, some group-focused researchers have even considered that romantic relationships may represent a very small type of intimacy group (e.g., Crawford & Salaman, 2012; Lickel et al., 2000). This claim might be debated by some close relationships researchers (e.g., Berscheid & Reis, 1998); however, future research could help to clarify these sorts of competing questions by further investigating the similarities and differences that emerge across different types of social relationships with regard to their impact on the self-concept.

Finally, the present research does possess some limitations that future research should endeavor to address. Specifically, the current research assessed all variables in a single study session. Examining how the current effects play out over a longer period of time could be informative, as well as strengthen the current claims of mediation. The current work has the advantage of experimentally manipulating the threat of group loss, which allows for us to make causal claims from our data. However, priming effects such as those emerging from our manipulation do not tend to last beyond a single laboratory session, thus all of our data had to be collected at one time point. Although our data strongly suggest a mediational pathway in which forecasted self-change accounts for the relationship between the threat of group loss and self-concept clarity, stronger mediational claims could be made if the effects of group loss were examined over time. Additionally, the current research manipulated participants' expectations about losing a group membership in the future and forecasts of self-change, but did not directly look at the actual loss of a group and actual self-change. Again, despite the strength of our current experimental approach, this approach necessitated the use of forecasted experiences and feelings that individuals are not always accurate in predicting (e.g., Wilson & Gilbert, 2003). That said, in the case of actual group loss and self-change, we believe that, under these stronger conditions, our effects would emerge even more convincingly. Finally, examining the role of group identification in more detail, with an eye on whether it plays a causal role, is an important avenue for future work. Manipulating the importance or centrality of the group to individuals could provide additional information about the causal role that group importance may play in determining how people respond to the threat of losing a group membership.

Conclusions

Individuals are involved in numerous types of relationships throughout their lives. Both romantic relationships and memberships in larger groups impact individuals' well-being as well as their general ideas about who they are. When a group is particularly important, individuals tend to incorporate the traits and attributes of that group into their own self-concepts. When the existence of an important group is threatened, as in the prospect of graduation for college students, individuals experience change to their self-concept, a lack of clarity about themselves, and decreased self-esteem. Because disruption to the self has the potential to be distressing, it is important to continue to learn more about how group memberships impact the self, and how individuals react to the loss of group memberships.

References

Aron, A. (2003). Self and close relationships. In M. R. Leary & J. P. Tangney (Eds.), *Handbook of self and identity* (pp. 442–461). New York, NY: Guilford Press.

Aron, A., Aron, E. N., Tudor, M., & Nelson, G. (1991). Close relationships as including other in the self. *Journal of Personality and Social Psychology, 60,* 241–253. http://dx.doi.org/10.1037/0022-3514.60.2.241

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51,* 1173–1182. http://dx.doi.org/10.1037/0022-3514.51.6.1173

Baumeister, R. F. (1998). The self. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *Handbook of social psychology* (4th ed., pp. 680–740). New York: McGraw-Hill.

Baumeister, R. F. (2010). The self. In R. F. Baumeister & E. J. Finkel (Eds.), *Advances in social psychology: The state of the science* (pp. 139–175). London, UK: Oxford University Press.

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117,* 497–529. http://dx.doi.org/10.1037/0033-2909.117.3.497

Bem, D. J. (1972). Self-perception theory. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (6th ed., pp. 1–62). New York, NY: Academic.

Berscheid, E., & Reis, H. T. (1998). Attraction and close relationships. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (4th ed., pp. 193–281). New York, NY: McGraw-Hill.

Bigler, M., Neimeyer, G. J., & Brown, E. (2001). The divided self revisited: Effects of self-concept clarity and self-concept differentiation on psychological adjustment. *Journal of Social and Clinical Psychology, 20,* 396–415. http://dx.doi.org/10.1521/jscp.20.3.396.22302

Bond, A. J., Ruaro, L., & Wingrove, J. (2006). Reducing anger induced by ego threat: Use of vulnerability expression and influence of trait characteristics. *Personality and Individual Differences, 40,* 1087–1097. http://dx.doi.org/10.1016/j.paid.2005.12.002

Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's mechanical turk: A new source of inexpensive, yet high quality, data? *Perspectives on Psychological Science, 6*(1), 3–5. http://dx.doi.org/10.1177/1745691610393980

Cameron, J. E. (2004). A three-factor model of social identity. *Self and Identity, 3,* 239–262. http://dx.doi.org/10.1080/13576500444000047

Campbell, J. D. (1990). Self-esteem and clarity of the self-concept. *Journal of Personality and Social Psychology, 59,* 538–549. http://dx.doi.org/10.1037/0022-3514.59.3.538

Campbell, J. D., Trapnell, P. D., Heine, S. J., Katz, I. M., Lavallee, L. F., & Lehman, D. R. (1996). Self-concept clarity: Measurement, personality correlates, and cultural boundaries. *Journal of Personality and Social Psychology, 70,* 141–156. http://dx.doi.org/10.1037/0022-3514.70.1.141

Coats, S., Smith, E. R., Claypool, H. M., & Banner, M. J. (2000). Overlapping mental representations of self and in-group: Reaction time evidence and its relationship with explicit measures of group identification. *Journal of Experimental Social Psychology, 36,* 304–315. http://dx.doi.org/10.1006/jesp.1999.1416

Cooley, C. H. (1902). *Human nature and the social order*. New York, NY: Scribner's.

Crawford, M. T., & Salaman, L. (2012). Entitativity, identity, and the fulfilment of psychological needs. *Journal of Experimental Social Psychology, 48,* 726–730. http://dx.doi.org/10.1016/j.jesp.2011.12.015

Edwards, J. R., & Lambert, L. S. (2007). Methods for integrating moderation and mediation: A general analytical framework using moderated path analysis. *Psychological Methods, 12,* 1–22. http://dx.doi.org/10.1037/1082-989X.12.1.1

Giguere, B., & Lalonde, R. N. (2009). The effects of social identification on individual effort under conditions of identity threat and regulatory depletion. *Group Processes & Intergroup Relations, 12,* 195–208. http://dx.doi.org/10.1177/1368430208101056

Grant, F., & Hogg, M. A. (2012). Self-uncertainty, social identity prominence, and group identification. *Journal of Experimental Social Psychology, 48,* 538–542. http://dx.doi.org/10.1016/j.jesp.2011.11.006

Hogg, M. A. (2006). Social identity theory. In P. J. Burke (Ed.), *Contemporary social psychological theories* (pp. 111–128). Stanford, CA: Stanford University Press.

Hogg, M. A. (2007). Uncertainty-identity theory. *Advances in Experimental Social Psychology, 39,* 69–126. http://dx.doi.org/10.1016/S0065-2601(06)39002-8

Hogg, M. A., & Reid, S. A. (2006). Social identity, self-categorization, and the communication of group norms. *Communication Theory, 16,* 7–30. http://dx.doi.org/10.1111/j.1468-2885.2006.00003.x

James, W. (1890). *The principles of psychology*. Cambridge, MA: Harvard University Press. http://dx.doi.org/10.1037/11059-000

Lewandowski, G. W., Aron, A., Bassis, S., & Kunak, J. (2006). Losing a self-expanding relationship: Implications for the self-concept. *Personal Relationships, 13,* 317–331. http://dx.doi.org/10.1111/j.1475-6811.2006.00120.x

Lickel, B., Hamilton, D. L., Wieczorkowska, G., Lewis, A., Sherman, S. J., & Uhles, A. N. (2000). Varieties of groups and the perception of group entitativity. *Journal of Personality and Social Psychology, 78,* 223–246. http://dx.doi.org/10.1037/0022-3514.78.2.223

Light, A. E., & Visser, P. S. (2013). The ins and outs of the self: Contrasting role exits and role entries as predictors of self-concept clarity. *Self and Iden-*

tity, 12, 291–306. http://dx.doi.org/10.1080/15298868.2012.667914

Markus, H. (1977). Self-schemata and processing information about the self. *Journal of Personality and Social Psychology, 35,* 63–78. http://dx.doi.org/10.1037/0022-3514.35.2.63

Markus, H., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review, 98,* 224–253. http://dx.doi.org/10.1037/0033-295X.98.2.224

Maslow, A. H. (1943). A theory of human motivation. *Psychological Review, 50,* 370–396. http://dx.doi.org/10.1037/h0054346

Mead, G. H. (1934). *Mind, self and society*. Chicago, IL: University of Chicago Press.

Muller, D., Judd, C. M., & Yzerbyt, V. Y. (2005). When moderation is mediated and mediation is moderated. *Journal of Personality and Social Psychology, 89,* 852–863. http://dx.doi.org/10.1037/0022-3514.89.6.852

Park, L. E., Sanchez, D. T., & Brynildsen, K. (2011). Maladaptive responses to relationship dissolution: The role of relationship contingent self-worth. *Journal of Applied Social Psychology, 41,* 1749–1773. http://dx.doi.org/10.1111/j.1559-1816.2011.00769.x

Paxton, P., & Moody, J. (2003). Structure and sentiment: Explaining emotional attachment to group. *Social Psychology Quarterly, 66,* 34–47. http://dx.doi.org/10.2307/3090139

Pickett, C. L., Bonner, B. L., & Coleman, J. M. (2002). Motivated self-stereotyping: Heightened assimilation and differentiation needs result in increased levels of positive and negative self-stereotyping. *Journal of Personality and Social Psychology, 82,* 543–562. http://dx.doi.org/10.1037/0022-3514.82.4.543

Pontin, J. (2007, March 25). Artificial intelligence: With help from the humans. *The New York Times*. Retrieved from http://www.nytimes.com/2007/03/25/business/yourmoney/25Stream.html

Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers, 36,* 717–731. http://dx.doi.org/10.3758/BF03206553

Reid, S. A., & Hogg, M. A. (2005). Uncertainty reduction, self-enhancement, and ingroup identification. *Personality and Social Psychology Bulletin, 31,* 804–817. http://dx.doi.org/10.1177/0146167204271708

Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.

Sahdra, B., & Ross, M. (2007). Group identification and historical memory. *Personality and Social Psychology Bulletin, 33,* 384–395. http://dx.doi.org/10.1177/0146167206296103

Sedikides, C., & Brewer, M. B. (2001). Individual self, relational self, collective self: Partners, opponents or strangers? In C. Sedikides & M. Brewer (Eds.), *Individual self, relational self, collective self* (pp. 1–4). Philadelphia, PA: Psychology Press.

Singer, J. D., & Willett, J. B. (2003). *Applied longitudinal data analysis*. New York, NY: Oxford University Press. http://dx.doi.org/10.1093/acprof:oso/9780195152968.001.0001

Slotter, E. B., & Gardner, W. L. (2009). Where do you end and I begin? Evidence for anticipatory, motivated self–other integration between relationship partners. *Journal of Personality and Social Psychology, 96,* 1137–1151. http://dx.doi.org/10.1037/a0013882

Slotter, E. B., Gardner, W. L., & Finkel, E. J. (2010). Who am I without you? The influence of romantic breakup on the self-concept. *Personality and Social Psychology Bulletin, 36,* 147–160. http://dx.doi.org/10.1177/0146167209352250

Smith, E. R., Coats, S., & Murphy, J. (2001). The self and attachment to relationship partners and groups: Theoretical parallels and new insights. In C. Sedikides & M. Brewer (Eds.), *Individual self, relational self, collective self* (pp. 109–122). Philadelphia, PA: Psychology Press.

Smith, E. R., & Henry, S. (1996). An in-group becomes part of the self: Response time evidence. *Personality and Social Psychology Bulletin, 22,* 635–642. http://dx.doi.org/10.1177/0146167296226008

Smith, E. R., Murphy, J., & Coats, S. (1999). Attachment to groups: Theory and measurement. *Journal of Personality and Social Psychology, 77,* 94–110. http://dx.doi.org/10.1037/0022-3514.77.1.94

Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33–47). Monterey, CA: Brooks/Cole.

Tropp, L. R., & Wright, S. C. (2001). Ingroup identification as inclusion of ingroup in the self. *Personality and Social Psychology Bulletin, 27,* 585–600. http://dx.doi.org/10.1177/0146167201275007

Turner, J. C., Oakes, P. J., Haslam, S. A., & McGarty, C. (1994). Self and collective: Cognition and social context. *Personality and Social Psychology Bulletin, 20,* 454–463. http://dx.doi.org/10.1177/0146167294205002

Turner, J. C., & Onorato, R. S. (1999). Social identity, personality, and the self-concept: A self-categorization perspective. In T. R. Tyler, R. M. Kramer, & O. P. John (Eds.), *The psychology of the social self* (pp. 11–46). Mahwah, NJ: Erlbaum.

Vignoles, V. L., Chryssochoou, X., & Breakwell, G. M. (2002). Evaluating models of identity motivation: Self-esteem is not the whole story. *Self and Identity, 1,* 201–218. http://dx.doi.org/10.1080/152988602760124847

Vignoles, V. L., Regalia, C., Manzi, C., Golledge, J., & Scabini, E. (2006). Beyond self-esteem: Influence of multiple motives on identity construction. *Journal of Personality and Social Psychology, 90,* 308–333. http://dx.doi.org/10.1037/0022-3514.90.2.308

Wilson, T. D., & Gilbert, T. D. (2003). Affective forecasting. *Advances in Experimental Social Psychology, 35,* 345–411. http://dx.doi.org/10.1016/S0065-2601(03)01006-2

Wu, C. (2009). The relationship between attachment style and self-concept clarity: The mediation effect of self-esteem. *Personality and Individual Differences, 47,* 42–46. http://dx.doi.org/10.1016/j.paid.2009.01.043

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