

# The joys of genuine giving: Approach and avoidance sacrifice motivation and authenticity

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## Abstract

Why do sacrifices undertaken in pursuit of approach and avoidance goals differentially influence well-being and relationship quality? A cross-sectional study (Study 1), an experiment (Study 2), and a 2-week daily experience study (Study 3) demonstrate that the personal and interpersonal outcomes of approach and avoidance sacrifice goals in dating and married relationships are mediated by felt authenticity. When people sacrificed for approach goals such as to make their partner happy, they felt more authentic, in turn contributing to greater personal and relationship well-being. However, when they sacrificed for avoidance goals such as to avoid conflict, they felt less authentic, in turn detracting from personal and relationship well-being. Implications for research and theory on motivational processes in close relationships are discussed.

The sacrifice which causes sorrow to the doer of the sacrifice is no sacrifice.

Real sacrifice lightens the mind of the doer and gives him a sense of peace and joy.

—Mahatma Gandhi

Conflicting interests and desires are inevitable in close relationships. A hallmark of satisfying and long-lasting relationships is the extent to which partners are willing to *sacrifice* their

own interests and desires for each other and for the sake of their relationship (see review by Impett & Gordon, 2008). Several studies have shown that the more willing people are to make sacrifices for their romantic partners, the more satisfied they feel with their relationships and the more likely they are to stay together over time (Van Lange, Agnew, Harinck, & Steemers, 1997; Van Lange, Rusbult, et al., 1997; Wieselquist, Rusbult, Foster, & Agnew, 1999). Although sacrifice is a beneficial component of romantic relationships, not all sacrifices are equal. Research guided by an approach–avoidance motivational perspective has revealed that people’s underlying motivations for making sacrifices shape their own emotional experiences and feelings about their relationships. This work has shown that the highest benefits from sacrifice are reaped when individuals sacrifice for *approach goals*, such as to please their partners or to create intimacy in their relationships, as opposed to *avoidance goals*, such as to avoid disappointing their partners or to avoid conflict (Impett, Gable, & Peplau, 2005). Although this emergent literature on

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This work has been funded by a grant from the Social Sciences and Humanities Research Council (Canada) awarded to Emily A. Impett, an SSHRC Vanier Fellowship awarded to Bonnie M. Le, and an Ontario Postdoctoral Fellowship awarded to Aleksandr Kogan. We would like to thank members of the Relationships and Well-Being Lab at the University of Toronto Mississauga for helpful comments on earlier versions of this manuscript.

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sacrifice has focused on the relationship benefits of sacrifice and how goals can shape daily experiences, no study to date has investigated *why* sacrificing for different types of goals differentially shapes people's emotions and feelings about their relationships. The central goal of the current set of studies was to test the hypothesis that the extent to which people feel *authentic* or "true" to themselves when they sacrifice is an important mechanism whereby approach and avoidance sacrifice goals shape personal and interpersonal outcomes in romantic relationships.

### *Approach–avoidance motivation and sacrifice*

Several theories of motivational processes postulate the existence of distinct approach and avoidance motivational systems (see Carver, Sutton, & Scheier, 2000, for a review). According to this perspective, some goals are focused on approaching positive outcomes while others are focused on avoiding negative outcomes. The approach–avoidance perspective has been applied to understand different motivational tendencies in the specific context of romantic relationships (Elliot, Gable, & Mapes, 2006; Gable, 2006). For example, in a discussion about household chores, a husband who has strong approach goals may be concerned with wanting both partners to be happy with the result of their discussion. On the other hand, a husband with strong avoidance goals may be concerned with avoiding conflict about household chores and preventing both partners from being unhappy with the outcome. Previous research has found that approach and avoidance goals are associated with different outcomes in romantic relationships (see review by Gable & Impett, 2012). For example, a recent study revealed that individuals with strong approach goals and their partners reported experiencing greater relationship satisfaction and showed greater behavioral responsiveness to a partner's needs as compared to those lower in approach goals (Impett et al., 2010). In contrast, individuals with strong avoidance goals and their partners reported feeling less

satisfied with their relationships and showed less behavioral responsiveness. In addition, research has shown that approach motivation in the domain of sexuality enables individuals to maintain high levels of sexual desire and relationship satisfaction, both on a daily basis and over the course of time in romantic relationships (Impett, Strachman, Finkel, & Gable, 2008; Muise, Impett, Kogan, & Desmarais, 2013).

Recently, scholars have begun to utilize the approach–avoidance motivational perspective to understand the predictors and consequences of sacrifice in intimate relationships (see review by Impett & Gordon, 2008). Results from an empirical study of dating relationships by Neff and Harter (2002) revealed that individuals who typically resolved conflicts by subordinating their own needs out of genuine concern for a partner's well-being reported being more personally fulfilled and experiencing a strengthened bond with their romantic partner. In contrast, those who subordinated their own needs in order to avoid conflict reported experiencing more resentment and weakened relationship ties. Additionally, Impett and colleagues (2005) found that on days when people sacrificed for approach goals, they experienced more positive emotions, greater satisfaction with life, higher relationship satisfaction, and less relationship conflict. In contrast, on days when participants sacrificed for avoidance goals, they experienced more negative emotions, lower satisfaction with life, less relationship satisfaction, and more conflict.

### *The importance of authenticity*

The primary goal of the current investigation was to understand *why* sacrificing for approach goals promotes increases in personal well-being and relationship quality as well as why sacrificing for avoidance goals can be so detrimental. We theorized that *authenticity* is a key mechanism that mediates the link between approach and avoidance sacrifice goals and both personal and relationship well-being. Authenticity is defined as the extent to which people behave in ways

that are consistent with their own inner feelings, attitudes, and beliefs (Sheldon, Ryan, Rawsthorne, & Ilardi, 1997; Wood, Linley, Maltby, Baliousis, & Joseph, 2008). Authenticity involves being genuine, “true to oneself,” or not “fake,” in one’s relationships with others (Kernis, 2003). We theorized that when individuals sacrifice in pursuit of approach goals, the act of sacrifice is a reflection of their intrinsic and genuine desires to care for their partner—that is, they recognize the benefits of sacrifice for themselves and their partner, and act accordingly. Thus, sacrificing for approach goals should provide individuals with a sense of authenticity. In contrast, we reasoned that when individuals sacrifice for avoidance goals, they subordinate and inhibit their personal desires in order to avoid the interpersonal consequences of not sacrificing. Thus, sacrificing for avoidance goals should result in feelings of inauthenticity. To date, no studies have investigated whether authenticity is a mechanism whereby sacrifice goals shape personal and relationship outcomes.

Much of the existing research on authenticity has characterized it as either an individual difference variable (i.e., a stable internal structure representing the core or “real” self) or as a relational construct (i.e., a unique experience of self with another specific person). Both of these conceptualizations of authenticity have been empirically linked with approach and avoidance motivation. For example, individual differences in authenticity are negatively associated with activation of the behavioral inhibition system (Pinto, Maltby, & Wood, 2011). That is, individuals who tend to engage in inhibitory behaviors to avoid confrontations with others report experiencing lower levels of authenticity (see also Lopez & Rice, 2006). Further, in the relational domain, Neff and Harter (2002) found that individuals who felt that they acted authentically when making decisions to give up their own needs in a relationship listed approach reasons for their actions such as to show support and unconditional love. On the other hand, those who felt inauthentic when giving up their own needs mainly cited avoidance reasons such as to avoid an argument. Similarly, earlier work by Miller (1986) and Roloff and Cloven (1990)

has shown that when people subordinate their own interests inauthentically, they tend to do so to avoid conflict in relationships.

Authenticity has long been thought to be an important component of psychological well-being and interpersonal functioning (Festinger, 1957; Rogers, 1961). Indeed, an extensive body of work has demonstrated that authenticity predicts better adjustment, including higher self-esteem, lower depression, greater life satisfaction, and greater relationship quality (Impett, Sorsoli, Schooler, Henson, & Tolman, 2008; Kernis & Goldman, 2006; Sheldon et al., 1997; Swann, De La Ronde, & Hixon, 1994). In addition, several recent studies in the literature on close relationships have demonstrated that people’s feelings of authenticity for sacrifice are strongly linked with their own emotional experience and with their feelings of closeness to a romantic partner (Impett et al., 2012; Kogan et al., 2010). If approach and avoidance sacrifice goals do indeed lead to different feelings of authenticity, then we reasoned that authenticity may serve as the catalyst for promoting or inhibiting personal and relationship well-being. Thus, we predicted that authenticity would mediate the relation between sacrifice goals and personal and relationship well-being.

### *Overview of the current research*

We conducted three studies to test our predictions regarding authenticity as a mediator of the link between approach and avoidance sacrifice goals and both personal and relationship well-being. Study 1 was a cross-sectional study in which participants responded to a series of hypothetical scenarios about sacrifice and then answered questions designed to measure their goals for sacrifice, authenticity, and feelings about sacrifice. Study 2 was an experimental study in which participants were randomly assigned to imagine making a series of approach- or avoidance-motivated sacrifices and was designed to provide a more stringent test of our theoretical model linking sacrifice goals with emotional and relationship outcomes. Study 3 was a 14-day daily experience

study designed to extend the results of the first two studies to a more naturalistic context.

## Study 1

Our initial study was a cross-sectional study of individuals in married relationships. In this study, participants read a series of hypothetical scenarios describing situations in which they and their spouse experienced conflicting interests in their relationship. We predicted that approach sacrifice goals would be associated with increased feelings of authenticity for sacrifice and, in turn, that authenticity would lead people to feel more positively about sacrifice. In contrast, we predicted that avoidance sacrifice goals would be associated with lower feelings of authenticity, in turn detracting from people's feelings about sacrifice.

### Method

#### *Participants and procedure*

Ninety married participants (57% female) were recruited from the United States from Amazon's Mechanical Turk, an online recruitment website. To be eligible for the current study, participants had to have been married for at least 6 months. Participants ranged in age from 18 to 68 years ( $M = 36.0$ ,  $SD = 10.9$ ) and comprised a diverse range of ethnic backgrounds: 49% were European (American), 12% were Asian (American), 7% Hispanic (American), 6% were African (American), 3% Native (American), and 22% self-identified as "other." After consenting to participate, participants provided demographic information and answered questions regarding three hypothetical sacrifice scenarios. Each participant was paid \$1 for completing the online survey.

#### *Measures*

*Sacrifice scenarios.* Participants were presented with three hypothetical scenarios used in previous research on sacrifice (Powell & Van Vugt, 2003). Each scenario described a situation in which the participant and his or her partner experienced conflicting interests

in their relationship. In the first scenario, participants were presented with a situation in which they needed to decide whether they would give up a Saturday morning outing with friends in order to accompany their romantic partner on a long car trip. In the second scenario, participants needed to decide if they would attend their romantic partner's work function when they would have rather stayed at home and watched television. In the third scenario, participants needed to decide between two job offers, one of which involved regularly working away from home and potentially upsetting their romantic partner. After each scenario, participants answered a series of questions regarding their sacrifice goals, authenticity, and feelings about sacrifice on 7-point scales.

*Sacrifice goals.* After reading each of the three scenarios, participants were asked to imagine that they had made the decision to sacrifice their own self-interests for their partner and then to rate their motivations for having made the sacrifice with questions used in previous research (Impett et al., 2005). Approach sacrifice goals were measured with two items ("To make my partner happy" and "To respond to my partner's needs";  $\alpha = .79$ ;  $M = 6.09$ ,  $SD = .77$ ); avoidance sacrifice goals were measured with three items ("To avoid disappointing my partner," "To avoid conflict with my partner," and "To avoid feeling guilty";  $\alpha = .78$ ;  $M = 4.93$ ,  $SD = 1.25$ ).

*Authenticity.* For each sacrifice, participants indicated how "authentic or 'true' to themselves" they would feel if they made the sacrifice ( $M = 4.97$ ,  $SD = 1.26$ ). This one-item measure has been used in previous research and has been shown to be a valid indicator of authenticity (Impett et al., 2012; Kogan et al., 2010).

*Feelings about sacrifice.* Participants were asked to indicate how they think they would have felt if they had chosen to make the sacrifice on a 7-point scale from 1 (*terrible*) to 7 (*terrific*; Gable, Reis, & Downey, 2003). In this sample,  $M = 4.55$ ,  $SD = 1.12$ .

**Table 1.** Intercorrelations among all variables in Study 1

	Approach	Avoidance	Authenticity	Feelings about sacrifice
Approach	—			
Avoidance	.38***	—		
Authenticity	.32**	-.09	—	
Feelings about sacrifice	.28**	-.08	.72***	—

\*\* $p < .01$ . \*\*\* $p < .001$ .

### Results and discussion

Intercorrelations among all variables are shown in Table 1. We tested our hypotheses regarding the link between sacrifice goals and people's feelings about sacrifice using regression with the open-source statistical program R 2.15.2 with the *lme4* (Bates & Maechler, 2009) and *language* (Baayen, 2009) packages. In all analyses, we used the individual-level aggregate of approach and avoidance goals. For all models, we conducted linear mixed model analyses, with both participant and scenario as random effects to account for data nesting (Judd, Westfall, & Kenny, 2012). We present Markov-Chain Monte Carlo (MCMC)-estimated  $p$  values for all models. To test for mediation, we constructed a 95% confidence interval for each indirect effect using bootstrapping techniques (Preacher & Hayes, 2008; Preacher & Selig, 2010). Significant mediation is indicated when the confidence interval does *not* include zero.

Consistent with our predictions, the more that participants indicated they would have sacrificed for approach goals, the more positive their reaction was to having made a sacrifice for their partner ( $b = .53$ ,  $t = 3.32$ ,  $p < .001$ ). In contrast, avoidance sacrifice goals were associated with less positive reactions to sacrifice, although this effect was only marginally significant ( $b = -.16$ ,  $t = -1.56$ ,  $p = .057$ ).

We next tested authenticity as a mechanism of these effects. We hypothesized that approach sacrifice goals would predict greater feelings of authenticity for the sacrifice, in turn leading people to feel more positively about the sacrifice. In contrast, we expected that avoidance sacrifice goals would result in

lower feelings of authenticity and subsequent decreases in positive feelings about the sacrifice. To test these predictions, we first evaluated whether approach and avoidance sacrifice goals predicted participants' feelings of authenticity. In line with our predictions, approach sacrifice goals predicted greater authenticity ( $b = .63$ ,  $t = 4.19$ ,  $p < .001$ ). In contrast, avoidance sacrifice goals were associated with lower authenticity ( $b = -.30$ ,  $t = -3.16$ ,  $p < .001$ ). Tests of mediation revealed that authenticity fully mediated the link between approach sacrifice goals and reactions to sacrifice (indirect effect = .44; 95% CI [.22, .69]; direct effect = .10,  $t = .73$ ,  $p = .41$ ), and authenticity also fully mediated the link between avoidance sacrifice goals and reactions to sacrifice (indirect effect = -.20; 95% CI [-.32, -.07]; direct effect = .04,  $t = .60$ ,  $p = .53$ ).

Our results support the prediction that when people sacrifice to pursue approach goals, they feel more authentic and that this sense of authenticity fuels their reactions to sacrifice. However, two alternative models could also explain our pattern of data. First, it could be that people who felt good about having made a sacrifice may have construed their motivation in an approach-oriented way, in turn leading them to feel more authentic. Conversely, people who felt badly about having made a sacrifice for their partner may have construed their sacrifice in more avoidance-motivated terms, in turn leading them to feel less authentic. To rule out these alternative pathways, we conducted a set of reverse mediation analyses in which we entered reactions to sacrifice (now as the predictor) and approach and avoidance goals (now as mediators) to predict feelings of

authenticity. These results indicated that adding sacrifice goals reduced the total effect of reactions to sacrifice on feelings of authenticity by only 11%. These results contrast with our hypothesized results, which resulted in an 82% reduction of the approach goals effect and 100% reduction of the avoidance goals effect on reactions to sacrifice when assessing the mediating role of authenticity.

A second alternative possibility is that people's goals might more directly influence their reactions to having made a sacrifice, and then people might base their feelings of authenticity on how they felt about the sacrifice. An additional set of reverse mediation analyses revealed that when approach and avoidance sacrifice goals and reactions to sacrifice (now as the mediator) were entered as predictors of daily authenticity, both remained significant but resulted in lower proportions in reduction of the total effect (52% for approach goals and 31% for avoidance goals) than our hypothesized results (again, 82% and 100%). Taken together, the results of both sets of mediation analyses suggest that goals shape people's reactions to sacrifice through feelings of authenticity, and not that people base their feelings of authenticity on their feelings about sacrifice, or that people's feelings about sacrifice lead them to possibly reconstrue their motivation.

## Study 2

Study 1 provided initial evidence for authenticity as a mechanism of the association between approach and avoidance goals and people's reactions to having made hypothetical sacrifices. Study 2 was designed to provide additional evidence that sacrificing in pursuit of approach versus avoidance goals differentially shapes authenticity and well-being. In addition to examining the link between sacrifice goals and people's own feelings about sacrifice, as we did in our first study, in Study 2, we also sought to examine the links between approach and avoidance sacrifice goals and people's well-being in their romantic relationships. To do so, we conducted an online experiment with individuals in exclusive dating or married relationships.

Participants were asked to imagine themselves making nine common types of sacrifices for their spouse, with half randomly assigned to an approach goals condition and the other half randomly assigned to an avoidance goals condition. After reading the scenarios, participants answered questions regarding how they expected to feel about the sacrifice as well as questions to measure relationship well-being. We predicted that people in the approach condition would report feeling more authentic when imagining themselves sacrificing their self-interest for a romantic partner, in turn leading them to feel better about having made the sacrifice as well as experience greater relationship well-being. In contrast, we expected that those in the avoidance condition would report feeling less authentic, in turn leading them to have less positive feelings about the sacrifice and experience lower relationship well-being.

## Method

### *Participants and procedure*

Two hundred and twenty-one participants (67% female) were recruited from the United States from Amazon's Mechanical Turk. To be eligible for the current study, participants had to have been in exclusive dating (11%) or married (89%) relationships. Participants ranged in age from 18 to 65 years ( $M = 33.7$ ,  $SD = 9.9$ ) and comprised a diverse range of ethnic backgrounds: 57% were European (American), 7% were Asian (American), 5% Hispanic (American), 7% were African (American), 3% Native American, and 21% self-identified as "other." After consenting to participate, participants provided demographic information and answered questions regarding nine hypothetical sacrifice scenarios. Each participant was paid \$.60 for completing the online survey.

### *Measures*

*Sacrifice scenarios.* Participants were presented with nine hypothetical scenarios adapted from previous research on sacrifice (Impett et al., 2005; Whitton, Stanley, & Markman, 2007). Each scenario described

a sacrifice that the participant would have to make for his or her partner. These nine scenarios included the following sacrifices: performing a household task neither partner enjoys, deciding not to buy something for the sake of joint finances, changing the way one says something around the partner, planning or changing one's schedule for the partner, having sex when one was more interested in sleep, holding back from complaining at a certain time, changing one's plans for the evening, listening sympathetically to the partner while he or she complained, and altering one's behavior around the house based on the partner's activity at the time. Participants were randomly assigned to one of two conditions: (a) an approach goals condition in which they were asked to imagine making each of the nine sacrifices for approach goals (i.e., to make their partner happy, to feel like a caring person, and to create more satisfaction in their relationship) or (b) an avoidance goals condition in which they were asked to imagine making each of the sacrifices for avoidance goals (i.e., to avoid feeling guilty, to avoid disappointing their partner, and to avoid conflict in their relationship). After each scenario, participants answered questions to assess their feelings of authenticity, expected emotions, and relationship quality. All questions were answered on 7-point scales. Alphas reported below represent the reliability coefficients for each measure across the nine scenarios. Participants were also asked how easy it was for them to imagine themselves making each sacrifice ( $\alpha = .88$ ;  $M = 5.51$ ,  $SD = 1.15$ ), and answers to this question did not differ across the two experimental conditions.

*Authenticity.* For each sacrifice, participants indicated how "authentic or 'true' to themselves" they would feel if they had made the sacrifice ( $\alpha = .79$ ;  $M = 4.84$ ,  $SD = 1.09$ ).

*Feelings about sacrifice.* Participants were asked to indicate how happy/pleased/joyful and angry/irritable/frustrated they would feel had they chosen to make the sacrifice (Impett et al., 2010; Impett et al., 2012; Srivastava et al., 2009). Responses to these two items

were highly correlated ( $r = -.52$ ,  $p < .001$ ) so we combined them (with responses to angry/irritable/frustrated reverse scored) to create a composite score of feelings about sacrifice ( $M = 4.73$ ,  $SD = 1.52$ ).

*Relationship well-being.* Relationship well-being was assessed with three positive indicators of relationship quality (satisfaction, closeness, and love) and three negative indicators of relationship quality (conflict, disappointed by partner, taken for granted by partner). We reverse scored the negative indicators and combined them with the positive indicators to create a composite measure of relationship well-being ( $\alpha = .88$ ;  $M = 5.12$ ,  $SD = 1.37$ ).

### Results and discussion

Intercorrelations among all dependent variables are shown in Table 2. As in Study 1, we tested our hypotheses regarding the link between sacrifice goals and people's feelings about sacrifice using regression in R 2.15.2 with the *lme4* and *language* packages. In all analyses, condition effects were compared by dummy coding the approach condition as 0 and the avoidance condition as 1. For all models, we conducted linear mixed model analyses, with both participant and scenario as random effects to account for data nesting (Judd et al., 2012). We present MCMC-estimated  $p$  values for all models. To test for mediation, we constructed a 95% confidence interval for each indirect effect using bootstrapping techniques with 20,000 resamples.

Consistent with our predictions, participants in the approach condition, as compared to the avoidance condition, indicated that they would have more positive feelings about the sacrifice (approach condition:  $M = 4.95$ ,  $SE = .17$ ; avoidance condition:  $M = 4.51$ ,  $SE = .17$ ;  $t = -3.54$ ,  $p < .001$ ). In addition, participants in the approach, as compared to the avoidance condition, indicated that they would feel greater relationship well-being (approach condition:  $M = 5.38$ ,  $SE = .15$ ; avoidance condition:  $M = 4.86$ ,  $SE = .15$ ;  $t = -4.12$ ,  $p < .001$ ) had they made the sacrifices for their partner.

**Table 2.** Intercorrelations among all dependent variables in Study 2

	Authenticity	Feelings about sacrifice	Relationship well-being
Authenticity	—		
Feelings about sacrifice	.69	—	
Relationship well-being	.67	.89	—

We next tested authenticity as a mechanism of these effects. We first evaluated whether approach and avoidance sacrifice goals predicted participants' feelings of authenticity about sacrifice. In line with our predictions, people in the approach sacrifice goals condition reported expecting to feel more authentic ( $M = 4.91$ ,  $SE = .17$ ) than people in the avoidance goals condition ( $M = 4.54$ ,  $SE = .18$ ,  $t = -2.61$ ,  $p = .002$ ). Tests of mediation revealed that authenticity partially mediated the link between sacrifice goals and feelings about sacrifice (indirect effect =  $-.22$ ; 95% CI [ $-.39$ ,  $-.05$ ]; direct effect =  $-.22$ ,  $t = -2.39$ ,  $p = .006$ ), and partially mediated the link between sacrifice goals and relationship well-being (indirect effect =  $-.22$ ; 95% CI [ $-.38$ ,  $-.05$ ]; direct effect =  $-.32$ ,  $t = -3.23$ ,  $p < .001$ ). Finally, all of the effects in this study remained significant after controlling for the ease with which participants could imagine themselves making each of the sacrifices for their partner.

### Study 3

Studies 1 and 2 provided initial evidence for authenticity as a mechanism of the link between approach and avoidance sacrifice goals and people's feelings about sacrifice. Despite the fact that we found evidence for our effects using both cross-sectional and experimental methods, both of these studies were limited by the use of hypothetical scenarios, so an important goal of our third study was to test our hypotheses in a more naturalistic context. To address this limitation, we conducted a 14-day daily experience study of sacrifice with a sample of individuals in dating relationships.

### Method

#### Participants and procedure

Seventy-three (64% female) individuals in dating relationships were recruited from introductory psychology classes at a large Canadian university. The participants ranged in age from 17 to 29 years ( $M = 19.5$ ,  $SD = 2.3$ ). In order to be eligible, participants had to be currently involved in a dating relationship. Participants comprised a diverse range of ethnic backgrounds: 35.7% were European, 35.5% were Asian, 6.8% were South American, 5.5% were Middle Eastern, 1.4% were African American, 4.1% were Caribbean, 4.2% were mixed-race, and 6.8% self-identified as "other."

The participants completed a 14-day online daily experience study and received credit toward psychology coursework in exchange for participation. They were asked to complete a 10-minute online survey each night before going to bed for 14 consecutive nights. They were instructed that in the event that they missed a diary at night, they should complete the diary the morning of the next day; however, they were also told that if they did not complete the diary by end of the morning of the next day, they should skip that diary. To maximize compliance with the daily nature of the protocol, reminder e-mails were sent to the participants who had not completed their daily diaries by 10 p.m. each night. Eight percent of diaries were completed the following morning, and limiting the sample to only end-of-day surveys did not change any of the results reported below. The mean number of completed diaries was 10.0 ( $SD = 3.7$ , minimum = 1, maximum = 14), producing a total of 883 diaries.



### Measures

On each diary day, participants completed measures of daily sacrifice, authenticity, personal well-being, and relationship quality, all answered on 7-point scales.

*Daily sacrifice goals.* Each day, participants responded to the following question: “Today did you have the opportunity to do anything that you did not particularly want to do for your partner? Or did you have the opportunity to give up something that you did want to do for the sake of your partner?” (Impett et al., 2005; Kogan et al., 2010). On days participants indicated they had the opportunity to sacrifice, they were then asked if they chose to make the sacrifice for their partner. Out of 14 possible days, participants reported sacrificing an average of 2.4 days (range = 0–10 days), for a total of 207 days across all participants. Two independent raters used a previously established coding scheme (Impett et al., 2005) to code the open-ended descriptions into 12 different kinds of sacrifice including school and work (30% of all sacrifices); errands, chores, and favors (17.5%); communication (11.7%); recreation (8.5%); health and lifestyle (7%); friends (4.5%); family (3.1%); intimacy (2.7%); major sacrifices (2.7%); gifts and money (1.8%); interactions with the other sex (1.8%); and appearance (.4%). The initial agreement rate was 92.8%, with  $\kappa = .91$ ,  $p < .001$ .

For each sacrifice that they made, participants completed a measure of daily sacrifice goals (Impett et al., 2005). Participants rated the importance of eight reasons in influencing their decision to sacrifice, with four items capturing *approach goals* (i.e., to feel good about myself, to make my partner happy, to feel like a caring person, to create more satisfaction in our relationship;  $\alpha = .71$ ;  $M = 4.63$ ,  $SD = 1.36$ ) and four items capturing *avoidance goals* (i.e., to prevent my partner from feeling upset, to avoid conflict in our relationship, to avoid feeling guilty, to avoid feeling selfish;  $\alpha = .81$ ;  $M = 3.95$ ,  $SD = 1.69$ ). We also asked three additional questions to obtain more nuanced information about the quality of the daily sacrifices, including *effort*

(“I put a lot of time and effort into making this sacrifice”;  $M = 4.17$ ,  $SD = 1.87$ ), *typicality* (“I frequently make sacrifices like this one for my partner”;  $M = 5.52$ ,  $SD = 1.48$ ), and *perceived partner needs* (“My partner really wanted or needed me to make this sacrifice”;  $M = 4.52$ ,  $SD = 1.94$ ).

*Authenticity.* Each time that participants made a daily sacrifice, they indicated their level of authenticity by responding to the question “I felt authentic (true to myself) while making the sacrifice” ( $M = 4.64$ ,  $SD = 1.81$ ; Impett et al., 2012; Kogan et al., 2010).

*Personal well-being.* Daily personal well-being was assessed with measures of positive emotions, negative emotions, and satisfaction with life. Each day, participants specified the extent to which they experienced each of eight emotions on average over the course of the day. This measure was adapted for use in romantic relationships from a measure of social emotions (Srivastava et al., 2009) and has been used in previous research with dating couples (Impett et al., 2010; Impett et al., 2012). The scale includes four positive emotions captured in synonym clusters: “happy/pleased/joyful,” “affectionate/loving/caring,” “cared about/loved/connected,” and “grateful/appreciative/thankful.” The scale also includes four negative emotions: “angry/irritable/frustrated,” “sad/depressed/down,” “lonely/isolated,” and “resentful toward my partner.” Participants also completed a three-item version of the Satisfaction With Life Scale (Diener, Emmons, Larsen, & Griffin, 1985). We created a composite measure of personal well-being including positive emotions, negative emotions (reverse scored) and satisfaction with life ( $\alpha = .94$ ;  $M = 5.50$ ,  $SD = 1.30$ ).

*Relationship well-being.* Daily relationship well-being was assessed with the same three indicators of positive relationship well-being and three indicators of negative relationship well-being measured in Study 2. We reverse scored the negative indicators and combined them with the positive indicators to create a

**Table 3.** Intercorrelations among key study variables in Study 3

	Approach goals	Avoidance goals	Authenticity	Personal well-being	Relationship well-being
Approach goals	—				
Avoidance goals	.46***	—			
Authenticity	.43***	-.06	—		
Personal well-being	.31***	-.06	.44***	—	
Relationship well-being	.32***	-.12	.49***	.57***	—

\*\*\* $p < .001$ .

composite measure of relationship well-being ( $\alpha = .91$ ;  $M = 5.58$ ,  $SD = 1.50$ ).

### Results and discussion

Due to the within-subject nature of the data—with diaries (Level 1) nested within participants (Level 2)—we used hierarchical linear modeling (HLM, version 6.08; Raudenbush, Bryk, Cheong, & Congdon, 2004) for all analyses. Intercorrelations among all study variables are shown in Table 3. To avoid confounding within- and between-person effects, we used techniques appropriate for a multilevel framework, partitioning all the Level 1 predictors (approach goals, avoidance goals, and authenticity) into their within- and between-variance components, which were person-mean centered and aggregated, respectively, and included both components in all models (Raudenbush & Bryk, 2002; Zhang, Zyphur, & Preacher, 2009). The Monte Carlo Method for Assessing Mediation (MCMAM; Selig & Preacher, 2008) was used to generate a 95% confidence interval for the indirect effects with 20,000 resamples.

Intercorrelations among all variables are shown in Table 3. Consistent with our predictions, on days when individuals sacrificed for approach goals (more than their own average across the 14-day study), they experienced greater personal well-being ( $b = .36$ ,  $t = 3.41$ ,  $p = .001$ ) and greater relationship quality ( $b = .66$ ,  $t = 5.37$ ,  $p < .001$ ). In contrast, on days when individuals sacrificed for avoidance goals (again, more than their own average), they experienced lower relationship

well-being ( $b = -.16$ ,  $t = -1.61$ ,  $p = .10$ ), although this effect was only marginally significant. Avoidance sacrifice goals were not significantly associated with daily personal well-being ( $b = -.08$ ,  $t = -.93$ ,  $p = .35$ ).

We next tested authenticity as a mechanism of these effects. We first examined whether approach and avoidance goals predicted feelings of authenticity during daily sacrifice. On days when participants sacrificed for approach goals, they felt a greater sense of authenticity ( $b = .77$ ,  $t = 5.73$ ,  $p < .001$ ), whereas avoidance sacrifice goals were associated with lower authenticity ( $b = -.27$ ,  $t = -2.44$ ,  $p < .001$ ). Further, authenticity fully mediated the link between approach sacrifice goals and personal well-being (indirect effect = .28; 95% CI [.16, .42]; direct effect = .15,  $SE = .11$ ,  $p = .26$ ), and partially mediated the link between approach sacrifice goals and relationship well-being (indirect effect = .22; 95% CI [.11, .34]; direct effect = .39,  $SE = .12$ ,  $p < .05$ .) In addition, authenticity fully mediated the link between avoidance sacrifice goals and relationship well-being (indirect effect =  $-.10$ ; 95% CI  $[-.19, -.02]$ ; direct effect =  $-.07$ ,  $SE = .10$ ,  $p = .48$ ).

As in Study 1, we also sought to show that our hypothesized model—with authenticity mediating the link between sacrifice goals and daily personal and relationship well-being—is a more likely explanation than two alternative models. In one set of analyses, when daily personal well-being and relationship well-being (now as predictors) and approach and avoidance sacrifice goals (now as mediators) were entered as predictors of daily authenticity, both remained significant

but resulted in lower proportions in reduction of the total effect (0%–27%) than our hypothesized results (41%–58%). In another set of analyses, when approach and avoidance sacrifice goals and the daily and relationship outcomes (now as mediators) were entered as predictors of daily authenticity, both remained significant but resulted in lower proportions in reduction of the total effect (15%–38%) than our hypothesized results (again, 41%–58%). These additional results suggest that goals shape daily personal and relationship well-being through feelings of authenticity, and not that people base their feelings of authenticity on their feelings about sacrifice, or that people's current mood or feelings about their relationships influenced their motivation.

In addition, instead of sacrifice goals leading to poorer personal and relationship outcomes, it could be that the "real" cause of the outcomes may have been influenced by the circumstances or the quality of the sacrifice itself. We addressed this alternative hypothesis with two types of analyses. First, we sought to examine if people were more likely to have made certain types of sacrifices for approach or avoidance goals. In a subsequent set of analyses, we entered the 12 different kinds of sacrifices (coded as 1 = *made that type of sacrifice*, 0 = *did not make it*) as predictors of approach and avoidance sacrifice goals. Type of sacrifice was unrelated to approach goals. However, on days when people made a sacrifice that had to do with recreation or errands, chores, and favors, they were higher in avoidance goals, whereas daily sacrifices related to school and work, health and lifestyle, or family, were associated with lower avoidance goals. Nonetheless, controlling for type of sacrifice, the association between avoidance sacrifice goals and relationship well-being remained significant, as did the mediation by authenticity. In the second analysis, we accounted for three additional variables in the daily diary analyses including the time and effort people put into making each sacrifice, the frequency with which participants had made similar sacrifices for their romantic partner in the past, and their perceptions of their partner's needs for the sacrifice.

After controlling for these three aspects of sacrifice, all of the associations between daily goals and authenticity, personal well-being, and relationship well-being remained significant. Taken together, the results of these control analyses suggest that goals shape personal and relationship well-being above and beyond any influence of the type of sacrifice enacted, the effort invested, the frequency of making similar sacrifices in the past, or perceptions of a partner's needs for the sacrifice.

## General Discussion

These studies applied an approach–avoidance motivational framework to the study of sacrifice to understand the role that two distinct types of goals play in shaping personal well-being as well as the quality of romantic relationships. In a cross-sectional study of individuals in married relationships (Study 1), an experimental study with individuals in exclusive dating or married relationships (Study 2), and a 2-week daily experience study of individuals in dating relationships (Study 3), we found that sacrificing for approach goals predicted greater personal and relationship well-being, whereas sacrificing for avoidance goals predicted lower personal and relationship well-being. Critically, we identified a mechanism for these effects. Specifically, approach goals predicted greater authenticity during sacrifice, whereas avoidance goals predicted greater inauthenticity. The sense of authenticity or genuineness that people felt when sacrificing their self-interests for a romantic partner, in turn, accounted for the associations between approach and avoidance sacrifice goals and personal and relationship well-being. Importantly, in the daily diary study, none of the effects could be accounted for by the type of sacrifice that was enacted, the amount of effort invested, the frequency with which similar sacrifices had been made in the past, or perceptions of a partner's needs for the sacrifice. In addition, results of reverse mediation analyses in the cross-sectional and daily diary studies provided stronger support for the conclusion that people's goals for sacrifice shape their

well-being and relationship quality through feelings of authenticity than for the alternative conclusions that people base their authenticity on their feelings about sacrifice or that people's current mood or feelings about their relationship influenced their motivation. Finally, the results of the experimental study provide additional evidence that people's goals for sacrifice are a critical predictor of their feelings of authenticity, personal well-being, and relationship well-being.

#### *Methodological and theoretical contributions*

The current research adds to a growing body of research that focuses on approach-avoidance motivation and social relationships (Elliot et al., 2006; Gable, 2006). In a recent review of research on social motivation and relationships, Gable and Impett (2012) called for research on the *mechanisms* underlying the effects of approach and avoidance goals on relationship outcomes. The three studies reported here were the first in the literature to investigate authenticity as a mediator of the links between approach and avoidance goals for sacrifice and personal and relationship well-being. The results indicate that one reason why people reap the greatest benefits of sacrifice when they sacrifice for approach goals is due to the fact that they feel more authentic when sacrificing to please their partners or to increase intimacy in their relationships. In contrast, people experience more conflict in their relationships, and feel more disappointed by and taken for granted by a romantic partner because they feel less authentic when they sacrifice for avoidance goals. Thus, the findings of the current research fill important gaps in the literature on the mechanisms underlying the effects of approach and avoidance goals on relationship outcomes, and extend previous research associating authenticity with psychological and interpersonal well-being (Impett, Sorsoli, et al., 2008; Kernis & Goldman, 2006; Sheldon et al., 1997; Swann et al., 1994).

A major strength of this research concerns the use of multiple samples and methods to test our hypotheses. To date, all of the existing

research on approach and avoidance goals for sacrifice has relied on samples of college students (Impett & Gordon, 2010; Impett et al., 2005; Mattingly & Clark, 2012). Our predictions were supported in a cross-sectional study of married individuals, an experimental study of both married and dating individuals, and a daily experience study of individuals in dating relationships. The daily nature of data collection in the diary study was also a notable strength. Surveying the participants daily over a 2-week period enabled us to reduce retrospective bias, study dynamic relational events within the context of daily life, and capture within-person variation in daily personal and relationship well-being.

#### *Limitations and future directions*

Although the results of our experimental study buttressed our confidence that sacrificing in pursuit of approach versus avoidance goals results in different feelings of authenticity and well-being, these results are limited by the use of hypothetical scenarios. At the same time, however, the scenarios used were based on existing research that has identified the kinds of sacrifices most commonly made by people in their daily lives (Impett et al., 2005; Whitton et al., 2007). In our experiment, we showed that making salient approach versus avoidance goals for sacrifice influenced people's personal and relationship well-being. However, and although challenging to elicit in a naturalistic way, actually getting people to make sacrifices in real life in pursuit of approach or avoidance goals would be a fascinating direction for future work.

Most of the participants in the samples were involved in relatively satisfying partnerships. It will be important for future research to determine if sacrifice goals shape personal well-being and relationship quality in samples that include more distressed couples (see review by McNulty & Fincham, 2012). It is possible that sacrificing for avoidance goals may not be as strongly associated with feelings of authenticity and negative emotions in relationships in which partners are currently experiencing higher levels of distress. A study of married couples found that people who felt

more supported by their spouses for goals that focused on avoiding negative outcomes felt more satisfied with their relationships than people who felt less supported by their spouses (Molden, Lucas, Finkel, Kumashiro, & Rusbul, 2009). If people expect their partners to react quite negatively if they do not sacrifice their self-interests, it may be possible that, in some situations and under certain conditions, choosing to sacrifice for avoidance goals may be more beneficial than deciding not to sacrifice at all.

It is also possible that individuals from an Eastern cultural background or those who have a relational interdependent self-construal may also be buffered against the harmful effects of avoidance goal pursuit. In a cross-cultural study of personal goals, when individuals from the United States adopted avoidance personal goals, they had lower overall levels of well-being, whereas those from South Korea and Russia had higher well-being when they pursued avoidance personal goals (Elliot, Chirkov, Kim, & Sheldon, 2001). In another study, Asians benefited more from receiving social support when they did not explicitly disclose their problems to others out of desires not to strain the relationship (Kim, Sherman, & Taylor, 2008). This prior work suggests that the pursuit of avoidance goals is not detrimental for all people and under all conditions, and that the extent to which people value maintaining harmony in relationships versus preserving their own autonomy (Markus & Kitayama, 1991) might play a critical role in shaping people's motivations for sacrifice as well as the outcomes of sacrifice in relationships.

Finally, all three of the studies included only one member of romantic couples. However, motivation in the domain of interpersonal relationships is different than motivation in other domains, such as academic achievement, because relationships involve two partners who each have their own goals in the relationship (Impett et al., 2010). We identify three interesting future directions concerning dyadic processes. First, it would be interesting to examine the dyadic factors that shape people's goals for sacrifice. For example, people might be more likely to sacrifice for approach

goals if their partner frames the sacrifice as a joint activity, but they might be more likely to sacrifice for avoidance goals if their partner would try to make them feel guilty if they did not sacrifice. Second, because the participants in Study 3 completed their daily surveys after the sacrifices were made, it is possible that their responses to the measure of sacrifices may have been influenced by their partner's reactions. Therefore, future research would benefit from investigating the recipient's emotional response to sacrifice. A third future direction concerns whether one person's feelings of genuineness or authenticity when making a sacrifice shapes his or her partner's emotional reaction to the sacrifice and feelings about the relationship.

### Conclusion

These limitations notwithstanding, the three studies reported here support previous research linking approach and avoidance sacrifice goals with personal and relationship well-being (Impett et al., 2005) and provide a critical extension to this work by identifying authenticity as a mediator of these associations. The results indicate that sacrifices undertaken in pursuit of avoidance goals feel inauthentic and detract from people's feelings about sacrifice as well as from the quality of their relationships. In contrast, sacrifices that are genuinely motivated by the desire to make a partner happy and to increase intimacy in a valued relationship are the types of daily acts of giving that may, as Gandhi suggested, bring about feelings of peace and joy.

### References

- Baayen, R. H. (2009). languageR: Data sets and functions with "Analyzing linguistic data: A practical introduction to statistics." R package version 0.955.
- Bates, D. M., & Maechler, M. (2009). lme4: Linear mixed-effects models using S4 classes. R package version 0.999375-32.
- Carver, C. S., Sutton, S. K., & Scheier, M. F. (2000). Action, emotion, and personality: Emerging conceptual integration. *Personality and Social Psychology Bulletin*, 26, 741-751. doi: 10.1177/0146167200268008

- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction With Life Scale. *Journal of Personality Assessment*, *49*, 71–75. doi:10.1207/s15327752jpa4901\_13
- Elliot, A. J., Chirkov, V. I., Kim, Y., & Sheldon, K. M. (2001). A cross-cultural analysis of avoidance (relative to approach) personal goals. *Psychological Science*, *12*, 505–510. doi:10.1111/1467-9280.00393
- Elliot, A. J., Gable, S. L., & Mapes, R. R. (2006). Approach and avoidance motivation in the social domain. *Personality and Social Psychology Bulletin*, *32*, 378–391. doi:10.1177/0146167205282153
- Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford, CA: Stanford University Press.
- Gable, S. L. (2006). Approach and avoidance social motives and goals. *Journal of Personality*, *74*, 175–222. doi:10.1111/j.1467-6494.2005.00373.x
- Gable, S. L., & Impett, E. A. (2012). Approach and avoidance motives and close relationships. *Social and Personality Psychology Compass*, *6*, 95–108. doi:10.1111/j.17519004.2011.00405.x
- Gable, S. L., Reis, H. T., & Downey, G. (2003). He said, she said: A quasi-signal detection analysis of daily interactions between close relationship partners. *Psychological Science*, *14*, 100–105. doi:10.1111/1467-9280.t01-1-01426
- Impett, E. A., & Gordon, A. (2008). For the good of others: Toward a positive psychology of sacrifice. In S. J. Lopez (Ed.), *Positive psychology: Exploring the best in people* (pp. 79–100). Westport, CT: Greenwood.
- Impett, E. A., & Gordon, A. (2010). Why do people sacrifice to approach rewards versus to avoid costs? Insights from attachment theory. *Personal Relationships*, *17*, 299–315. doi:10.1111/j.1475-6811.2010.01277.x
- Impett, E. A., Sorsoli, L., Schooler, D., Henson, J. M., & Tolman, D. L. (2008). Relationship authenticity and girls' self-esteem across adolescence. *Developmental Psychology*, *44*, 722–733. doi:10.1037/0012-1649.44.3.722
- Impett, E. A., Strachman, A., Finkel, E. J., & Gable, S. L. (2008). Maintaining sexual desire in intimate relationships: The importance of approach goals. *Journal of Personality and Social Psychology*, *94*, 808–823. doi:10.1037/0022-3514.94.5.808
- Impett, E. A., Gable, S. L., & Peplau, L. A. (2005). Giving up and giving in: The costs and benefits of daily sacrifice in intimate relationships. *Journal of Personality and Social Psychology*, *89*, 327–344. doi:10.1037/0022-3514.89.3.327
- Impett, E. A., Gordon, A. M., Kogan, A., Oveis, C., Gable, S. L., & Keltner, D. (2010). Moving toward more perfect unions: Daily and long-term consequences of approach and avoidance goals in romantic relationships. *Journal of Personality and Social Psychology*, *99*, 948–963. doi:10.1037/a0020271
- Impett, E. A., Kogan, A., English, T., John, O., Oveis, C., Gordon, A., & Keltner, D. (2012). Suppression sours sacrifice: Emotional and relational costs of suppressing emotions in romantic relationships. *Personality and Social Psychology Bulletin*, *38*, 707–720. doi:10.1177/0146167212437249
- Judd, C. M., Westfall, J., & Kenny, D. A. (2012). Treating stimuli as a random factor in social psychology: A new and comprehensive solution to a pervasive but largely ignored problem. *Journal of Personality and Social Psychology*, *103*, 54–69. doi:10.1037/a0028347
- Kernis, M. H. (2003). Toward a conceptualization of optimal self-esteem. *Psychological Inquiry*, *14*, 1–26. doi:10.1207/S15327965PLI1401\_01
- Kernis, M. H., & Goldman, B. M. (2006). A multi component conceptualization of authenticity: Theory and research. *Advances in Experimental Social Psychology*, *38*, 283–357. doi:10.1016/S0065-2601(06)38006-9
- Kim, H. S., Sherman, D. K., & Taylor, S. E. (2008). Culture and social support. *The American Psychologist*, *63*, 518–526. doi:10.1037/0003-066X
- Kogan, A., Impett, E. A., Oveis, C., Hui, B., Gordon, A. M., & Keltner, D. (2010). When giving feels good: The intrinsic benefits of sacrifice in romantic relationships for the communally motivated. *Psychological Science*, *21*, 1918–1924. doi:10.1177/0956797610388815
- Lopez, F. G., & Rice, K. G. (2006). Preliminary development and validation of a measure of relationship authenticity. *Journal of Counseling Psychology*, *53*, 362–371. doi:10.1037/0022-0167.53.3.362
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, *98*, 224–253. doi:10.1037/0033-295X.98.2.224
- Matingly, B. A., & Clark, E. M. (2012). Weakening relationships we try to preserve: Motivated sacrifice, attachment, and relationship quality. *Journal of Applied Social Psychology*, *42*, 373–386. doi:10.1111/j.1559-1816.2011.00893.x
- McNulty, J. K., & Fincham, F. D. (2012). Beyond positive psychology? Toward a contextual view of psychological processes and well-being. *The American Psychologist*, *67*, 101–110. doi:10.1037/a0024572
- Miller, J. B. (1986). *Toward a new psychology of women*. Boston, MA: Beacon Press.
- Molden, D. C., Lucas, G. M., Finkel, E. J., Kumashiro, M., & Rusbult, C. (2009). Perceived support for promotion-focused and prevention-focused goals: Associations with well-being in unmarried and married couples. *Psychological Science*, *20*, 787–793. doi:10.1111/j.1467-9280.2009.02362.x
- Muise, A., Impett, E. A., Kogan, A., & Desmarais, S. (2013). Keeping the spark alive: Being motivated to meet a partner's sexual needs sustains sexual desire in long-term romantic relationships. *Social Psychological and Personality Science*, *4*, 267–273. doi:10.1177/1948550612457185
- Neff, K. D., & Harter, S. (2002). The authenticity of conflict resolutions among adult couples: Does women's other-oriented behavior reflect their true selves? *Sex Roles*, *47*, 403–417. doi:10.1023/A:1021692109040

- Pinto, D. G., Maltby, J., & Wood, A. M. (2011). Exploring the tripartite model of authenticity within Gray's approach and inhibition systems and Cloninger's bio-social model of personality. *Personality and Individual Differences, 51*, 194–197. doi:10.1016/j.paid.2011.03.040
- Powell, C., & Van Vugt, M. (2003). Genuine giving or selfish sacrifice? The role of commitment and cost level upon willingness to sacrifice. *European Journal of Social Psychology, 33*, 403–412. doi:10.1002/ejsp.154
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods, 40*, 879–891. doi:10.3758/BRM.40.3.879
- Preacher, K. J., & Selig, J. P. (2010, July). Monte Carlo method for assessing multilevel mediation: An interactive tool for creating confidence intervals for indirect effects in 1-1-1 multilevel models [Computer software]. Available from <http://quantpsy.org/>
- Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods* (2nd ed.). Newbury Park, CA: Sage.
- Raudenbush, S. W., Bryk, A. S., Cheong, Y. F., & Congdon, R. T. (2004). *HLM 6: Hierarchical linear and nonlinear modeling*. Chicago, IL: Scientific Software International.
- Rogers, C. (1961). *On becoming a person: A therapist's view of psychotherapy*. Boston, MA: Houghton Mifflin.
- Roloff, M. E., & Cloven, D. H. (1990). The chilling effect in interpersonal relationships: The reluctance to speak one's mind. In D. D. Cahn (Ed.), *Intimates in conflict: A communication perspective* (pp. 49–76). Hillsdale, NJ: Erlbaum.
- Selig, J. P., & Preacher, K. J. (2008, June). Monte Carlo method for assessing mediation: An interactive tool for creating confidence intervals for indirect effects [Computer software]. Available from <http://quantpsy.org/>
- Sheldon, K. M., Ryan, R. M., Rawsthorne, L. J., & Ilardi, B. (1997). Trait self and true self: Cross-role variation in the Big-Five personality traits and its relations with psychological authenticity and subjective well-being. *Journal of Personality and Social Psychology, 73*, 1380–1393. doi:10.1037/0022-3514.73.6.1380
- Srivastava, S., Tamir, M., McGonigal, K. M., John, O. P., & Gross, J. J. (2009). The social costs of emotional suppression: A prospective study of the transition to college. *Journal of Personality and Social Psychology, 96*, 883–897. doi:10.1037/a0014755
- Swann, W. B., de la Ronde, C., & Hixon, J. G. (1994). Authenticity and positivity strivings in marriage and courtship. *Journal of Personality and Social Psychology, 66*, 857–869. doi:10.1037/0022-3514.66.5.857
- Van Lange, P. A. M., Agnew, C. R., Harinck, F., & Steemers, G. (1997). From game theory to real life: How social value orientation affects willingness to sacrifice in ongoing close relationships? *Journal of Personality and Social Psychology, 73*, 1330–1344. doi:10.1037/0022-3514.73.6.1330
- Van Lange, P. A., Rusbult, C. E., Drigotas, S. M., Arriaga, X. B., Witcher, B. S., & Cox, C. L. (1997). Willingness to sacrifice in close relationships. *Journal of Personality and Social Psychology, 72*, 1373–1395. doi:10.1037/0022-3514.72.6.1373
- Whitton, S. W., Stanley, S. M., & Markman, H. J. (2007). If I help my partner, will it hurt me? Perceptions of sacrifice in romantic relationships. *Journal of Social and Clinical Psychology, 26*, 64–92. doi:10.1521/jscp.2007.26.1.64
- Wieselquist, J., Rusbult, C. E., Foster, C. A., & Agnew, C. R. (1999). Commitment, pro-relationship behavior, and trust in close relationships. *Journal of Personality and Social Psychology, 77*, 942–966. doi:10.1037/0022-3514.77.5.942
- Wood, A. M., Linley, P. A., Maltby, J., Baliousis, M., & Joseph, S. (2008). The authentic personality: A theoretical and empirical conceptualization, and the development of the Authenticity Scale. *Journal of Counseling Psychology, 55*, 385–399. doi:10.1037/0022-0167.55.3.385
- Zhang, Z., Zyphur, M. J., & Preacher, K. J. (2009). Testing multilevel mediation using hierarchical linear models: Problems and solutions. *Organizational Research Methods, 12*, 695–719. doi:10.1177/1094428108327450