

# When You Think Your Partner Is Holding Back: The Costs of Perceived Partner Suppression During Relationship Sacrifice

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## Abstract

Do people benefit when they think their partner has made a sacrifice for the relationship? In a multimethod study of 80 couples, we examined whether people can detect when their partner suppresses their emotions and if perceived partner suppression is costly for the recipient of sacrifice. When people listened to their partner recall an important sacrifice in the lab and when people thought their partner sacrificed in daily life, they thought that their partner was less authentic the more they perceived them to have suppressed their emotions. In turn, perceived partner inauthenticity during sacrifice was associated with poorer personal well-being and relationship quality. These effects persisted over time with perceived partner suppression predicting poorer relationship quality 3 months later. The results were independent from the influence of an actor's projection of their own suppression and their partner's actual suppression. Implications for research on emotion regulation and close relationships are discussed.

## Keywords

close relationships, emotion regulation, emotion, emotion in relationships, helping/prosocial behavior

A hallmark of satisfying and long-lasting relationships concerns the extent to which partners are willing to *sacrifice* their own interests and desires for one another (see review by Impett & Gordon, 2008). People who are more willing to sacrifice for an intimate partner are more satisfied with their relationships (Van Lange et al., 1997), and on the flip side, perceiving a romantic partner engage in costly actions for the relationship increases people's own commitment (Joel, Gordon, Impett, MacDonald, & Keltner, 2013; Wieselquist, Rusbult, Foster, & Agnew, 1999). Even though people may sacrifice for their partner with good intentions, we argue that recipients of sacrifice may not always benefit. Sacrifice has the potential to elicit strong emotions, some of which people might be motivated to conceal from their partner. Hiding these emotions could impact how the recipient feels, although recent research has yielded mixed results regarding whether one person's suppression detracts from how the recipient feels about the relationship (Impett et al., 2012). The current article builds upon this initial work to investigate if perceiving a partner suppress their emotions when making a sacrifice maps onto the partner's actual use of suppression and to test the central hypothesis that—beyond any potential influence of the partner's actual use of suppression—people will experience costs when they *perceive* that their partner has suppressed their emotions and has not been authentic in their attempt to benefit the relationship.

## The Costs of Suppression

Suppression is a form of emotion regulation that involves concealing ongoing emotional expression after an emotional response has been elicited (Gross, 1998). A growing body of work has shown that suppression is personally and interpersonally costly, especially when used chronically (see review by English, John, & Gross, 2013). Habitual suppression is linked with lower personal well-being, less closeness with others, and less satisfying relationships (e.g., English & John, 2013; Gross & John, 2003; Srivastava, Tamir, McGonigal, John, & Gross, 2009). Suppression is costly in part because suppressors feel that they are not being authentic (English & John, 2013; Gross & John, 2003)—or acting in a way that is consistent with their inner feelings, attitudes, and beliefs (Sheldon, Ryan, Rawsthorne, & Ilardi, 1997).

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Only a couple of studies have examined how suppression impacts the *partners* with whom suppressors interact, with results suggesting that while suppression does not impact a partner's emotional experience (Butler et al., 2003; Richards, Butler, & Gross, 2003), it can prevent people from being responsive to an interaction partner's needs (Butler et al., 2003). In a study of previously unacquainted female dyads, the partners of women experimentally induced to suppress their emotions did not experience more negative emotions, but they were less willing to form a friendship with their interaction partner and perceived them as lower in responsiveness than the partners of women who were instructed to act naturally (Butler et al., 2003). The lack of consistent effects of suppression on partners might be due to the fact that people do not always accurately *perceive* when their partner suppresses their emotions, especially since suppression involves trying to conceal one's emotions from others, making it potentially difficult to detect.

### *Suppression in the Context of Sacrifice*

Sacrifice is a particularly important context in which to investigate the relationship effects of suppression given that giving up one's self-interest has the potential to elicit strong emotions (Impett, Gable, & Peplau, 2005; Kogan et al., 2010), some of which people may be motivated to try to conceal from their romantic partner. In an initial study, Impett et al. (2012) found that when people suppressed their emotions when making a sacrifice for their romantic partner, they felt that their sacrifices were not an authentic reflection of their true selves, and in turn, they experienced poorer personal well-being and lower relationship quality. People experienced suppression as costly when they recalled important sacrifices in the lab, when they made sacrifices in daily life, and over the course of time in their relationships. Mirroring the results in the literature on emotion regulation more generally, the partner effects in the Impett et al. (2012) study were more mixed. Whereas people felt less satisfied with their relationships when their partner suppressed their emotions when making daily sacrifices for the relationship, suppression was not associated with the romantic partner's emotional experience in the laboratory or the partner's feelings about the relationship over time. The lack of effects of suppression on the recipient of sacrifice could reflect the possibility that people are not particularly good at detecting their partner's use of suppression, and instead, that people's perceptions of their partner's suppression might be a more potent, proximal predictor of people's feelings about their relationships.

### *The Detection of Suppression*

The first goal of the current research was to examine whether people can accurately detect a romantic partner's use of suppression during sacrifice. We expected that people would be able to detect their partner's use of suppression with at least a moderate degree of accuracy. This prediction is based on our

reasoning that people may be highly attuned to how their partner experiences and deals with the emotions they feel during sacrifice since deviations from self-interest can signal a romantic partner's commitment to and investment in the relationship (Joel et al., 2013; Wieselquist et al., 1999). However, given that suppression is the behavioral tendency to conceal one's emotions from others (Gross, 1998), we expected that any correspondence between partner reports of suppression and actual partner suppression would be low but not completely negligible, given that there are some nonverbal indicators of suppression (e.g., compromised responsiveness, appearing more withdrawn and hostile; Butler et al., 2003; Butler, Lee, & Gross, 2007) that might make suppression detectable.

### *Perceived Partner Suppression and Authenticity*

Given that previous research in the literature on emotion regulation (Butler et al., 2003) and sacrifice (Impett et al., 2012) suggests that one partner's use of suppression might not have very strong effects on an interaction partner, the second goal of the current study was to test the hypothesis that people's *perceptions* of their partner's suppression will be an important, potent predictor of how people feel about their relationship. Indeed, several decades of research on social support (see review by Uchino, 2009) and recent research on responsiveness (Lemay, Clark, & Feeney, 2007) has shown that agreement between providers and recipients regarding the enactment of supportive and responsive behaviors is often weak. Further, perceptions of a partner's supportiveness and responsiveness are a much stronger predictor of well-being and relationship quality than partners' actual reports of support provision (see review by Wethington & Kessler, 1986).

In the current study, we tested the central hypothesis that perceived partner suppression will detract from the quality of romantic relationships. We expected perceiving one's partner suppress their emotions would be personally and interpersonally costly due to the fact that people will think that their partner has been *inauthentic* in their desire to benefit the relationship when they suppress their emotions. Suppression is associated with lower authenticity (English & John, 2013; Gross & John, 2003; Impett et al., 2012), and authenticity fosters trust and intimacy (Kernis, 2003), two processes that are integral to relationship development and maintenance (Murray & Holmes, 2009; Reis, Clark, & Holmes, 2004). Given the importance of authenticity for relationships (Kernis & Goldman, 2006; Lopez & Rice, 2006), we expected that thinking that one's partner has not been genuine or authentic when making a sacrifice would be harmful. In particular, we theorized that perceiving one's romantic partner withhold their emotions when making a sacrifice would signal that the partner is sacrificing in a begrudging manner, rather than out of a genuine desire to benefit the relationship.

### *The Current Study*

The current article is written to be a companion to Impett et al. (2012) as we use the same data set of 80 romantic couples to

investigate if perceived partner suppression maps onto actual partner suppression and if there are distinct costs of perceiving a partner suppress their emotions. We first examined the effects of perceived partner suppression on emotional experience and relationship quality while couples recalled important sacrifices that they had made for their relationship in the laboratory. Then, to broaden the ecological validity of these effects and obtain a more naturalistic account of sacrifice, we examined the effects of perceived partner suppression for sacrifices made during a 2-week period in daily life. Finally, we examined the effects of perceived partner suppression on the quality of romantic relationships over a 3-month period of time.

Since all of the methods used in this study were nonexperimental, we conducted a rigorous set of control analyses to document the distinct costs of perceived partner suppression above and beyond the influence of several additional factors. First, we sought to show that there are detrimental effects of perceived partner suppression above and beyond the already documented effects of actual partner suppression (Impett et al., 2012). Second, we sought to show that the costs of perceived partner suppression are not due to people projecting their own suppression onto their partner (see work by Lemay et al., 2007, on projected responsiveness). Third, we wanted to demonstrate that any detrimental effects of perceived partner suppression are not due to people thinking that their partner experienced more negative emotions and therefore had more reason to suppress. Finally, it was important to show that our effects hold above and beyond other individual difference factors (i.e., habitual suppression, neuroticism, extraversion, attachment anxiety, and avoidance; Gross & John, 2003) and global characteristics of the relationship (i.e., commitment and satisfaction; English & John, 2013) that have been shown to be associated with suppression.

## Method

### Participants and Procedure

Eighty couples were recruited for a large dyadic study. Participants comprised a diverse range of ethnic backgrounds: 53% were European or European American, 18% were Chinese or Chinese American, 8% were African or African American, 4% were Mexican or Mexican American, and 17% were of other ethnicities. Participants ranged in age from 18 to 60 ( $M = 23.9$ ,  $SD = 6.4$ ). The couples had been involved in their current relationship from 6 months to 30 years (Median = 1 year, 3 months;  $SD = 3$  years, 8 months), and 48% of the couples were cohabitating.

Participants were recruited from the San Francisco Bay Area through the use of paper flyers and online through Craigslist.org. Both partners completed an initial online survey before coming to our laboratory. While in the lab, couples participated in conversations about three topics: sacrifice, love, and a time of personal suffering. The sacrifice conversations always came first and participants were asked to “describe a time in your life when you made an especially important or meaningful sacrifice

for your partner. This sacrifice could involve something important that you have given up for the sake of your partner or something that you did for your partner that you didn’t particularly want to do.” Controlling for length ( $M = 3$  min, 28 s;  $SD = 1$  min, 23 s) and order of whom engaged in the conversation first—the man or the woman in the dyad (assigned through a coin flip)—does not change any of the reported effects. Then, beginning the day of the laboratory session, both members of the couple completed a 10-min online survey for 14 consecutive nights. We emphasized that each diary should be completed in private, that the partners should not discuss their answers with one another, and that we would never reveal their responses to each other. Participants completed an average of 12.2 (of the 14) diaries per person as determined by an automatic time stamp generated by the website. Finally, 3 months after their last diary, participants completed a 10-min online follow-up survey. One hundred and thirty (81%) of the participants completed this survey (see online Supplement A found at <http://spps.sagepub.com/supplemental>). Each member of the couple was paid US \$60.

### Baseline Measures

Descriptive statistics for all study variables are shown in online Supplement B found at <http://spps.sagepub.com/supplemental>. *Relationship satisfaction* (5 items;  $\alpha = .90$ ) and *commitment* (7 items;  $\alpha = .92$ ) were assessed on a 7-point scale with the Rusbult, Martz, and Agnew (1998) measure. We measured *thoughts about breaking up* with 4 items ( $\alpha = .71$ ) adapted from Booth, Johnson, and Edwards (1983) and described in Impett et al. (2012). *Attachment anxiety* (18 items;  $\alpha = .91$ ) and *attachment avoidance* (18 items;  $\alpha = .88$ ) were measured with the Experiences in Close Relationships scale (Brennan, Clark, & Shaver, 1998), *habitual suppression* (3 items;  $\alpha = .61$ ) was measured with the Emotion Regulation Questionnaire (ERQ; Gross & John, 2003), and *neuroticism* (8 items;  $\alpha = .84$ ) and *extraversion* (8 items;  $\alpha = .87$ ) were measured with the Big Five Inventory (John & Srivastava, 1999), all on 5-point scales.

### Laboratory Measures

Participants answered questions about how they felt and how they think their partner felt and behaved after listening to them recall a time when they made a sacrifice for the relationship, all on 7-point scales. *Perceived partner suppression* was measured with three questions ( $\alpha = .71$ ) adapted from the ERQ: “My partner controlled his/her emotions by not expressing them”; “When my partner was feeling negative emotions, he/she was careful not to express them”; and “When my partner was feeling positive emotions, he/she made sure not to express them.” *Perceived partner authenticity* was measured with the question: “My partner was authentic (true to him/herself)” (Impett et al., 2012; Kogan et al., 2010; see online Supplement C found at <http://spps.sagepub.com/supplemental>). Participants also rated their *positive emotions* (8 items;  $\alpha = .95$ ), *negative emotions* (7 items;  $\alpha = .86$ ), and *perceptions of their partner’s*

*negative emotions* (to be used in control analyses; 7 items;  $\alpha = .89$ ) with an established measure of emotions (Srivastava et al., 2009). Participants also rated their own suppression when discussing their own sacrifice (also for control analyses; 3 items;  $\alpha = .69$ ). Two coders independently coded the conversations for the size/severity of the sacrifice (1 = *not at all major* to 7 = *very major*;  $\alpha = .80$ ).

### Daily Measures

All diary measures have been used in previous daily experience research (Impett et al., 2005, 2012; Kogan et al., 2010) and were completed on 5-point scales. We calculated reliability with procedures described in Cranford et al. (2006). *Daily sacrifice* was assessed with the question: “Today, did your partner do anything that he/she did not particularly want to do for you? Or, did your partner give up something that he/she did want to do for your sake?” We limited the diary data set to participants who reported that their partner made at least one sacrifice during the study. These participants (76.2% of the sample) reported receiving an average of 3.27 sacrifices ( $SD = 2.58$ ; range = 1–12). Each time that participants reported that their partner made a sacrifice, they rated perceived partner suppression for the sacrifice (3 items from the ERQ;  $\alpha = .70$ ), perceived partner authenticity (1 item; “My partner felt authentic (true to himself/herself) while making this sacrifice”), their positive emotions (8 items;  $\alpha = .86$ ), negative emotions (7 items;  $\alpha = .72$ ), and perceptions of their partner’s negative emotions (to be used in control analyses; 7 items;  $\alpha = .77$ ) with the same measures used in the lab study. Each day regardless of whether participants perceived that their partner made a sacrifice, they completed 3 items ( $\alpha = .92$ ) from the Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985). Participants also indicated the extent to which they experienced “satisfaction,” “closeness” and “love,” which were combined into a measure of *relationship quality* ( $\alpha = .91$ ), as well as a 1-item indicator of daily *conflict*. Participants also answered questions to assess their own daily sacrifice (yes/no) and their own suppression (to be used in control analyses; 3 items;  $\alpha = .67$ ).

### Follow-Up Measures

Three months after the daily experience study, participants completed the same measures of relationship satisfaction ( $\alpha = .92$ ), commitment ( $\alpha = .92$ ), and *breakup thoughts* ( $\alpha = .78$ ) measured at baseline.

## Results

### Data Analysis Plan

We used multilevel modeling to test our hypotheses. In the lab and longitudinal parts of the study, we tested a two-level model in Statistical Package for the Social Sciences v.20 to account for the fact that partners are nested within dyads. In the daily experience part of the study, we tested a three-level model in

HLMwin v.6.08 (Raudenbush, Bryk, Cheong, & Congdon, 2004) to account for the fact that days are nested within people, which are further nested within couples (see online Supplement D found at <http://spps.sagepub.com/supplemental>). In the diary study, to avoid confounding within- and between-person effects, we used techniques appropriate for a multilevel framework, partitioning all the Level-1 predictors into their within- and between-variance components, which were person-mean centered and aggregated respectively, with both components included in all models (Raudenbush & Bryk, 2002; Zhang, Zyphur, & Preacher, 2007). All reported results represent the person-mean centered effects. All analyses were conducted with the slopes of the Level-1 predictors included as random effects at Level 2, thus allowing for the Level-1 effects to vary from person to person (Bolger, Davis, & Rafaeli, 2003). We report significant results in the diary using robust standard errors (*SEs*), which guard against violations of normality (Raudenbush & Bryk, 2002). To test for mediation, we used the Monte Carlo Method for Assessing Mediation (MCMAM; Preacher & Selig, 2010) to generate a 95% confidence interval (CI) for the indirect effect with 20,000 resamples. Significant mediation is indicated when the upper and lower limits of the CI do *not* include zero. See online Supplement E found at <http://spps.sagepub.com/supplemental> for intercorrelations among all study variables.

### Detection of a Partner’s Suppression

Our first goal was to determine if people can accurately detect when their partner suppresses their emotions when making a sacrifice. We examined the link between a sacrificer’s own reports of suppression and the recipient’s perceptions of that person’s suppression as couples discussed important sacrifices that they had made for the relationship in the lab and when couples made sacrifices in daily life. The link between perceived partner suppression and the partner’s use of suppression was marginally significant in the lab ( $b = .15$ ,  $SE = .09$ ,  $p = .09$ ) and in daily life ( $b = .11$ ,  $SE = .06$ ,  $p = .07$ ). Thus, while people can to a certain extent pick up on their partner’s use of suppression when they make a sacrifice, they are not particularly accurate at doing so.

### Costs of Perceived Partner Suppression

After having demonstrated that perceived partner suppression and the partner’s reports of their suppression are not highly overlapping, our second goal was to test the prediction that perceiving one’s partner suppress their emotions would be associated with lower personal well-being and relationship quality. Beginning with the laboratory data, as shown in Table 1, when people thought their partner suppressed their emotions when recalling their sacrifice, they experienced more negative emotions, less positive emotions, and lower perceived partner authenticity. Further, perceived partner authenticity mediated the link between perceived partner suppression and both positive and negative emotions.

**Table 1.** Total, Direct, and Indirect Effects for Models With Perceived Partner Authenticity Mediating the Link Between Perceived Partner Suppression and Outcomes in the Laboratory.

	Laboratory Outcomes		
	Positive Emotions	Negative Emotions	Perceived Partner Authenticity
Perceived partner suppression			
Total effect	-.37*** (.09)	.31*** (.07)	-.49*** (.09)
Direct effect	-.27* (.09)	.26*** (.07)	—
Indirect effect	-.12 [-.22, -.04]	.06 [.01, .12]	—

Note. Numbers outside parentheses are unstandardized hierarchical linear modeling (HLM) coefficients; numbers inside parentheses are standard errors; numbers inside brackets are upper and lower limits of 95% confidence intervals using the Monte Carlo Method for Assessing Mediation (MCMAM).

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

Regarding sacrifices made in daily life, as shown in Table 2, on days when people perceived their partner suppress their emotions when they made a sacrifice (more than they typically did across the 14-day study), they reported experiencing more negative emotions, less positive emotions, less satisfaction with life, lower relationship quality, more conflict, and lower perceived partner authenticity. MCMAM analyses revealed that perceived partner authenticity mediated the link between perceived partner suppression and all five of the daily outcomes.

Finally, we sought to determine if the effects of perceived partner suppression documented in the daily diary study would be relatively short lived or if they would persist over a longer period of time. In these analyses, we focused on the aggregate of perceived partner suppression from the diary. As expected, the more that people perceived their partner suppress their emotions when making sacrifices in daily life, the less satisfied they felt with their relationship at the 3-month follow-up controlling for their baseline satisfaction ( $b = -.31$ ,  $SE = .17$ ,  $p = .06$ ), and the less committed they felt controlling for baseline commitment ( $b = -.26$ ,  $SE = .10$ ,  $p = .01$ ). Perceived partner suppression was not significantly associated with thoughts about breaking up ( $b = .09$ ,  $SE = .05$ ,  $p = .11$ ). None of these effects were mediated by the aggregate of perceived partner authenticity from the diary. See online Supplements F–G found at <http://spps.sagepub.com/supplemental> for additional longitudinal analyses.

### Ruling Out Alternative Explanations

We also wanted to rule out several alternative explanations. First, we sought to show that the effects of perceived partner suppression exist above the effects of the partner's actual use of suppression demonstrated in Impett et al. (2012). After controlling for the partner's own reports of suppression, all of the effects of perceived partner suppression, as well as the mediations by perceived partner authenticity remained significant.<sup>1</sup> These results suggest that there are distinct costs of perceiving

a partner suppress their emotions above and beyond the partner's actual reports of suppression.

Second, we wanted to show that the effects of perceived partner suppression were not due to people possibly projecting their own suppression onto their partner. Indeed, own suppression was significantly correlated with perceived partner suppression (see online Supplement E found at <http://spps.sagepub.com/supplemental>). However, after controlling for the actor's own suppression, all of the effects of perceived partner suppression and all of the mediations remained significant with two exceptions: The effect for relationship quality in the diary<sup>2</sup> and relationship satisfaction at the follow-up dropped to non-significance. Thus, while people did indeed project their own suppression onto their partner, people's own suppression did not account for the majority of the effects.

Third, we sought to show that the costs of suppression were not simply due to people thinking that their partner *experienced* more negative emotions and therefore had more reason to suppress. Indeed, people's perceptions of their partner's negative emotions were significantly correlated with perceived partner suppression (see online Supplement E found at <http://spps.sagepub.com/supplemental>). However, the effects of perceived partner suppression and all of the mediations remained significant after controlling for perceived partner negative emotions with one exception: The effect of perceived partner suppression on negative emotions in the lab dropped to nonsignificance after controlling for people's perceptions of their partner's negative emotions. These results suggest that there are distinct costs of perceiving one's partner suppress their emotions above and beyond the negative emotions that people think that their partner experienced when making (or discussing) sacrifices.

We also sought to ensure that our effects were not being driven by general personality or relationship characteristics of the perceiver, including habitual suppression, neuroticism, extraversion, attachment anxiety, attachment avoidance, and global relationship satisfaction and commitment. All of our results remained significant when we controlled for each of these factors. None of these factors significantly moderated any of the daily effects, lab, or longitudinal effects, suggesting that perceived partner suppression is costly regardless of individual differences in personality and global relationship quality. Finally, all of the effects remained significant after we controlled for outside observers' ratings of the size/severity of the conflict, and sacrifice size did not moderate any of our results. See online Supplement H found at <http://spps.sagepub.com/supplemental> for additional analyses regarding the roles of gender and race.

### Discussion

The results of this study build upon existing work on emotion regulation by examining for the first time if people's perceptions of a partner's suppression map onto the partner's own reports and by examining if these perceptions are associated with personal well-being and relationship quality during sacrifice. We found that people's perceptions of their partner's

**Table 2.** Total, Direct, and Indirect Effects for Models With Perceived Partner Authenticity Mediating the Link Between Perceived Partner Suppression and Daily Outcomes.

	Daily Outcomes					
	Positive Emotions	Negative Emotions	Satisfaction with Life	Relationship Quality	Conflict	Perceived Partner Authenticity
Perceived partner suppression						
Total effect	-.16* (.07)	.15** (.05)	-.21* (.11)	-.20* (.09)	.30** (.09)	-.30** (.09)
Direct effect	-.09 (.07)	.10* (.05)	-.13 (.11)	-.10 (.10)	.23** (.09)	—
Indirect effect	-.10 [-.17, -.04]	.05 [.02, .08]	-.07 [-.15, -.01]	-.09 [-.18, -.03]	.09 [.03, .18]	—

Note. Numbers outside parentheses are unstandardized hierarchical linear modeling (HLM) coefficients; numbers inside parentheses are standard errors; numbers inside brackets are upper and lower limits of 95% confidence intervals using the Monte Carlo Method for Assessing Mediation (MCMAM).

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

suppression were only marginally correlated with their partner's own reports of suppression. The low correlation between partner reports is not surprising, given that suppression involves trying to hide or conceal one's emotions from others (Gross & John, 2003), but is likely detectable to some degree such as by lowering responsiveness (Butler et al., 2003). However, despite the fact that these reports are weakly correlated, above and beyond what their partner actually reported doing, if people *thought* that their partner suppressed their emotions, they viewed their partner's sacrifice as inauthentic and, in turn, experienced significant emotional and relationship costs. Further, the majority of the costs of perceived partner suppression were experienced above and beyond people projecting their own suppression onto their partner, the perception that one's partner felt negatively about having made the sacrifice, or individual differences in personality traits of the perceiver or global relationship characteristics.

This study contributes to the literature on close relationships by identifying one condition under which sacrifice may not be beneficial. Research has shown that people feel more satisfied and committed when they perceive their partner to have given up their self-interest for the relationship (Joel et al., 2013; Wieselquist et al., 1999). Our results extend this work by showing that the *ways* in which people think that their partner makes a sacrifice are crucial: People experienced poorer well-being and relationship quality when they perceived the giver to have held back their emotions and not been authentic when making a sacrifice for the relationship. These findings highlight the need to examine the conditions under which sacrifice benefits versus harms relationships and suggest that *how* people sacrifice may be just as important as the act of sacrifice itself.

Perceived partner authenticity was only a partial mediator of the effects of perceived partner suppression in the lab and in the diary, and it did not mediate the longitudinal effects, suggesting that people's perceptions of a partner's authenticity for specific sacrifices might matter more than perceptions of a partner's trait-level authenticity. Future research would benefit from examining other factors that explain why perceived partner suppression is costly. Given that lowered responsiveness detracts from high-quality social interactions between a suppressor and their interaction partner (Butler et al., 2003) and

that perceived partner responsiveness is a crucial building block for relationship intimacy (Reis et al., 2004), responsiveness is another likely candidate mechanism.

In the current study, we found that perceiving a partner suppress their emotions during sacrifice was associated with decreased relationship quality. However, there might be specific circumstances under which perceived partner suppression is not costly and might even benefit relationships. For example, research has indicated that highly interdependent people (Markus & Kitayama, 1991) can be buffered against the costs of suppression (Butler et al., 2007; Cheung & Park, 2010) and can even feel authentic and experience higher quality relationships when suppressing in the specific domain of sacrifice (Le & Impett, 2013). Future research examining individual differences in interdependence as well as in the flexible use of suppression (Bonnano & Burton, 2013) or the use of suppression in different contexts (Aldao, 2013) would be valuable.

In conclusion, while sacrifice typically has positive consequences for relationships, the current findings suggest that it may paradoxically be costly if people think that their partner has suppressed their emotions and not been genuine. Thus, the outcomes associated with sacrifice seem to be maximally beneficial when people trust that their partner has openly expressed the emotions they genuinely felt when making a sacrifice on their behalf.

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## Notes

1. In the diary study, of the total sacrifices, only 56% were perceived by a partner and therefore covariate analyses are limited to those cases.
2. In the diary study, both partners reported sacrificing on 37% of days, so covariate analyses are limited to those cases.

## References

- Aldao, A. (2013). The future of emotion regulation research: Capturing context. *Perspectives on Psychological Science*, *8*, 155–172. doi:10.1177/1745691612459518
- Bolger, N., Davis, A., & Rafaeli, E. (2003). Diary methods: Capturing life as it is lived. *Annual Review of Psychology*, *54*, 579–616. doi:10.1146/annurev.psych.54.101601.145030
- Bonnano, G. A., & Burton, C. L. (2013). Regulatory flexibility: An individual differences perspective on coping and emotion. *Perspectives on Psychological Science*, *8*, 591–612.
- Booth, A., Johnson, D., & Edwards, J. N. (1983). Measuring marital instability. *Journal of Marriage and Family*, *45*, 387–394. doi:10.2307/351516
- Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measurement of adult attachment: An integrative overview. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 46–76). New York, NY: Guilford.
- Butler, E. A., Egloff, B., Wilhelm, F. H., Smith, N. C., Erickson, E. A., & Gross, J. J. (2003). The social consequences of expressive suppression. *Emotion*, *3*, 48–67. doi:10.1037/1528-3542.3.1.48
- Butler, E. A., Lee, T. L., & Gross, J. J. (2007). Emotion regulation and culture: Are the social consequences of emotion suppression culture-specific? *Emotion*, *7*, 30–48. doi:10.1037/1528-3542.7.1.30
- Cheung, R. Y. M., & Park, I. J. K. (2010). Anger suppression, interdependent self-construal, and depression among Asian American and European American college students. *Cultural Diversity and Ethnic Minority Psychology*, *16*, 517–525. doi:10.1037/a0020655
- Cranford, J. A., Shrout, P. E., Masumi, I., Rafaeli, E., Yip, T., & Bolger, N. (2006). A procedure for evaluating sensitivity to within-person change: Can mood measures in diary studies detect change reliably? *Personality and Social Psychology Bulletin*, *32*, 917–929. doi:10.1177/0146167206287721
- 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
- English, T., & John, O. P. (2013). Understanding the social effects of emotion regulation: The mediating role of authenticity for individual differences in suppression. *Emotion*, *13*, 314–329. doi:10.1037/a0029847.
- English, T., John, O. P., & Gross, J. J. (2013). Emotion regulation in close relationships. In J. A. Simpson & L. Campbell (Eds.), *The Oxford handbook of close relationships* (pp. 500–513). New York, NY: Oxford University Press.
- Gross, J. J. (1998). Antecedent- and response-focused emotion regulation: Divergent consequences for experience, expression, and physiology. *Journal of Personality and Social Psychology*, *74*, 224–237. doi:10.1037/0022-3514.74.1.224
- Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, *85*, 348–362. doi:10.1037/0022-3514.85.2.348
- 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. (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 Publishing.
- Impett, E. A., Kogan, A., English, T., John, O., Oveis, C., Gordon, A., & Keltner, D. (2012). Suppression sours sacrifice: Emotional and relationship costs of suppressing emotions in romantic relationships. *Personality and Social Psychology Bulletin*, *38*, 707–720. doi:10.1177/0146167212437249
- Joel, S., Gordon, A. M., Impett, E. A., MacDonald, G., & Keltner, D. (2013). The things you do for me: Perceptions of a romantic partner's investments promote gratitude and commitment. *Personality and Social Psychology Bulletin*, *39*, 1333–1345.
- John, O. P., & Srivastava, S. (1999). The big five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (2nd ed., pp. 102–138). New York, NY: Guilford.
- Kernis, M. H. (2003). Toward a conceptualization of optimal self-esteem. *Psychological Inquiry*, *14*, 1–26. doi:http://dx.doi.org/10.1207/S15327965PLI1401\_01
- Kernis, M. H., & Goldman, B. M. (2006). A multicomponent conceptualization of authenticity: Research and theory. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 38, pp. 284–357). San Diego, CA: Academic Press.
- Kogan, A., Impett, E. A., Oveis, C., Hui, B., Gordon, A., & 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:10.2307/40984594
- Le, B. M., & Impett, E. A. (2013). When holding back helps: Suppressing negative emotions during sacrifice feels authentic and is beneficial for the highly interdependent. *Psychological Science*, *24*, 1809–1815.
- Lemay, E. P., Clark, M. S., & Feeney, B. C. (2007). Projection of responsiveness to needs and the construction of satisfying communal relationships. *Journal of Personality and Social Psychology*, *92*, 834–853. doi:10.1037/0022-3514.92.5.834
- 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
- Murray, S. L., & Holmes, J. G. (2009). The architecture of interdependent minds: A motivation-management theory of mutual responsiveness. *Psychological Review*, *116*, 908–928. doi:10.1037/a0017015
- Preacher, K. J., & Selig, J. P. (2010). 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]. Retrieved 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.
- Reis, H. T., Clark, M. S., & Holmes, J. G. (2004). Perceived partner responsiveness as an organizing construct in the study of intimacy and closeness. In D. J. Mashek & A. P. Aron (Eds.), *Handbook of closeness and intimacy* (pp. 201–225). Mahwah, NJ: Lawrence Erlbaum.
- Richards, J. M., Butler, E. A., & Gross, J. J. (2003). Emotion regulation in romantic relationships: The cognitive consequences of concealing feelings. *Journal of Social and Personal Relationships*, *20*, 599–620. doi:10.1177/02654075030205002
- Rusbult, C. E., Martz, J. M., & Agnew, C. R. (1998). The investment model scale: Measuring commitment level, satisfaction level, quality of alternatives, and investment size. *Personal Relationships*, *5*, 357–391. doi:10.1111/j.1475-6811.1998.tb00177.x
- 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
- Uchino, B. N. (2009). Understanding the links between social support and physical health: A lifespan perspective with emphasis on the separability of perceived and received support. *Perspectives on Psychological Science*, *4*, 236–255. doi:10.1111/j.1745-6924.2009.01122.x
- Van Lange, P. A. M., Rusbult, C. E., Drigotas, S. M., Arriaga, X. M., 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
- Wethington, E., & Kessler, R. C. (1986). Perceived support, received support, and adjustment to stressful life events. *Journal of Health and Social Behavior*, *27*, 78–89. doi:10.2307/2136504
- 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
- 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

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