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Taking stock of reality: biased perceptions of the costs of romantic partners' sacrifices

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Supplemental Materials 2: Additional Experimental Study—Report and Assessments

Results from Study 1 consistently showed that while people accurately tracked their romantic partner's sacrifice costs, they also perceived their partner's sacrifice as more costly than the partner (the sacrificer) reported their costs to be. Before conducting Study 2 reported in the manuscript, we first conducted a pre-registered study designed to replicate our initial highly ecologically valid—but correlational—findings in an experimentally controlled setting in which participants imagined themselves or their partner to sacrifice. Note that this experiment did not include the control condition (eventually included in Study 2 in the manuscript) in which an unknown other would make that same relational sacrifice. Similar to Study 2, we examined whether people's greater perception of their partner's sacrifice costs is accompanied by also perceiving the benefits of the sacrifice as lower than when people appraise the benefits of own sacrifices (Righetti & Impett, 2017). We pre-registered our hypotheses before data collection. This pre-registration, data, and syntax are available on the Open Science Framework (osf.io/q7f2d).

Methods

Participants. The sample consisted of 441 romantically involved individuals (29% men, 71% women¹), with a mean age of 34 years ($SD = 9.7$), and an average relationship length of 9.8 years ($SD = 8.3$). Participants' relationship status varied from being married (51.9%), engaged (11.8%), exclusively dating (35.6%), to open relationships (0.7%), and 84% cohabited with their partner. We targeted a sample of 400 participants, determined with a power calculation (G*Power) allowing for 80% power to detect a small to medium effect size ($d = .25$). Originally, we collected 519 participants, but two participants identified as single, four participants admitted to dishonesty, one participant failed the attention check, 28 participants failed the manipulation

check (i.e., failed to identify the condition they were in), and 43 participants were removed because of duplicated IP addresses.

Measures and procedures. Participants were recruited through the online platform Prolific (Palan & Schitter, 2017). They were randomly assigned to either the own or partner sacrifice condition, in which they were presented with three different sacrifice scenarios in a randomized order and with a minimum display time of 25 seconds. In the own sacrifice condition, participants were asked to imagine that they made each of the sacrifices, while in the partner sacrifice condition, participants were asked to imagine, for the exact same sacrifice scenarios, that their partner made these sacrifices. The scenarios were inspired by previous research on divergence of interests and sacrifices that people regularly encounter in their relationships (Righetti et al., 2016; Visserman et al., 2019), such as making plans as a couple, spending time with their partner's family, or coordinating household tasks (see *Assessments*).

After reading each sacrifice scenario, participants reported how costly the sacrifice would be for themselves or their partner, using three items (i.e., how “big,” “costly,” and “hard” the sacrifice would be). The three items, across the three scenarios (i.e., 9 items in total), reliably fit together in one composite score indicating sacrifice costs ($\alpha = .84$, and $\alpha = .85$, in the own sacrifice and partner sacrifice condition respectively). Next, participants reported on the benefits of the sacrifice. In the own sacrifice condition, they rated how positively they would feel about their own sacrifice, and how beneficial they feel their sacrifice would be for themselves, and for the relationship. In the partner sacrifice condition, participants rated how positively the *partner* would feel about the sacrifice their partner would make, and how beneficial the *partner* would feel that the sacrifice would be for themselves, and for the relationship. These three items, across the three scenarios (i.e., 9 items in total), reliably fit together in one composite score indicating

sacrifice benefits ($\alpha = .80$, and $\alpha = .81$, in the own sacrifice and partner sacrifice condition respectively). All items were assessed on a 7-point scale (e.g., 1 = *not at all costly* to 7 = *very costly*) (see *Assessments*). After participants had rated each scenario, a manipulation check was administered by asking whether they imagined that they made the sacrifices, their partner made the sacrifices, or that they did not remember. Next, an attention check was administered by asking participants to choose reply option “3” out of four possible replies (1, 2, 3, and 4). Last, participants were asked whether they replied truthfully to all questions, and whether they were indeed romantically involved, while stressing that their answers would not affect their payment; after which they were financially compensated (£1,0).

Results

Analysis of Variance (ANOVA), using SPSS v.23, was used to analyze the difference in sacrifice costs and benefits between the own and the partner sacrifice condition. As expected, participants rated the sacrifices as significantly more costly in the partner sacrifice condition ($M = 4.05$, $SD = 1.28$) as compared to the own sacrifice condition ($M = 3.26$, $SD = 1.24$), $F(1, 440) = 43.50$, $p < .001$, $\eta^2 = .09$, $d = .63$. In contrast, the perceived sacrifice benefits were rated as lower in the partner sacrifice condition ($M = 4.46$, $SD = 1.00$) as compared to the own sacrifice condition ($M = 4.72$, $SD = 1.03$), $F(1, 440) = 7.35$, $p = .007$, $\eta^2 = .02$, $d = .26$ (see Table S1). Note that although gender did not moderate our findings in Studies 1 and 2 of the manuscript, in the present study we found a significant moderation by gender of the effect of condition on benefits ratings ($b = .11$, $SE = .05$, $t(440) = 2.06$, $p = .040$). Men rated the sacrifice benefits as lower in the partner sacrifice condition ($M = 4.24$, $SD = 0.99$) as compared to the own sacrifice condition ($M = 4.82$, $SD = 0.95$), $F(1, 128) = 11.39$, $p = .001$, $\eta^2 = .08$, while this difference was non-significant in women, although trending in the same direction ($p = .236$).

Table S1.

Means and standard deviations for sacrifice costs and benefits in the own sacrifice and the partner sacrifice conditions.

Condition	Sacrifice costs		Sacrifice benefits		<i>n</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Own sacrifice	3.26 ^a	1.24	4.72 ^a	1.03	227
Partner sacrifice	4.05 ^b	1.28	4.46 ^b	1.00	214

Note. Means within one column (i.e., sacrifice costs or sacrifice benefits) with different subscripts are significantly different.

Assessments

Sacrifice scenarios

“We will present you with a few situations now in which you / your partner makes a sacrifice, and would like to ask you to carefully read each scenario. Try to really imagine that this is happening in your relationship with your partner right now. After each scenario we will ask you a few questions about the sacrifice.”

Scenario 1

Note. Scenario 1 is identical to the sacrifice scenario used in Study 2 in the manuscript.

Partner sacrifice condition

“You and your partner are making plans for this Saturday night. You would really like to go to the movies with your partner and watch a new movie that you have been looking forward to seeing, and that has a special premier this Saturday night. Your partner has a different preference

for this Saturday night. S/he really wants to go out with his/her best friends, as they are all available that night. (S)he hasn't seen them for a long time and was looking forward to finally catching up with them again.

Eventually your partner decides not to go out with his/her friends to go instead to the movies with you.”

Own sacrifice condition

“You and your partner are making plans for this Saturday night. Your partner would really like to go to the movies with you and watch a new movie that (s)he has been looking forward to seeing, and that has a special premier this Saturday night. You have a different preference for this Saturday night. You really want to go out with your best friends, as they are all available that night. You haven't seen them for a long time and were looking forward to finally catching up with them again.

Eventually you decide not to go out with your friends to go instead to the movies with your partner.”

Scenario 2

Partner sacrifice condition

“Imagine that your family has organized a family brunch on Sunday late in the morning. You are very much looking forward to seeing your family again, and you express to your partner how much you would love for him/her to be there too. However, your partner isn't in the mood to spend time with your family, and would much rather stay home and have some time for him/herself, as (s)he would finally have some time to watch his/her favorite tv series or read a book.

After some consideration your partner decides to not stay home and instead give in to your wish to join the family gathering.”

Own sacrifice condition

“Imagine that your partner’s family has organized a family brunch on Sunday late in the morning. Your partner is very much looking forward to seeing his/her family again, and expresses to you how much (s)he would love for you to be there too. However, you aren’t in the mood to spend time with your partner’s family, and would much rather stay home and have some time for yourself, as you would finally have some time to watch your favorite tv series or reading a book.

After some consideration you decide to not stay home and instead give in to your partner’s wish to join the family gathering.”

Scenario 3

Partner sacrifice condition

“Imagine that you and your partner live together, and you are behind on household tasks, such as vacuum cleaning, doing the dishes, laundry, and doing groceries. Although you both like a clean and tidy house, neither of you likes to actually do these household task. It’s Saturday morning, you have had a busy week, you want to sleep in and rest, and really don’t feel like cleaning today. However, today would be the only day that you and your partner would have time for cleaning.

Imagine that your partner decides to take on all these household tasks by him/herself today, and lets you sleep in and rest.”

Own sacrifice condition

“Imagine that you and your partner live together, and you are behind on household tasks, such as vacuum cleaning, doing the dishes, laundry, and doing groceries. Although you both like a clean and tidy house, neither of you likes to actually do these household task. It’s Saturday morning, your partner has had a busy week, (s)he wants to sleep in and rest, and really doesn’t feel like cleaning today. However, today would be the only day that you and your partner would have time for cleaning.

Imagine that you decide to take on all these household tasks by yourself today, and let your partner sleep in and rest.”

Items

Partner sacrifice condition

Costs

- “How costly would the sacrifice be for your partner?”
- “How big would the sacrifice be for your partner?”
- “How hard would your partner find it to make this sacrifice?”

Benefits

- “How beneficial would the sacrifice be for your partner?”
- “How positively would your partner feel about this sacrifice?”
- “How beneficial would your partner feel this sacrifice would be for your relationship?”

Own sacrifice condition

Costs

- “How costly would the sacrifice be for you?”
- “How big would the sacrifice be for you?”

- “How hard would you find it to make this sacrifice?”

Benefits

- “How beneficial would the sacrifice be for you?”
- “How positively would you feel about this sacrifice?”
- “How beneficial would you feel this sacrifice would be for your relationship?”

All items were assessed on a 7-point scale (e.g., 1 = *not at all costly* to 7 = *very costly*)

Manipulation check

“Earlier in this study you were asked to read several sacrifice scenarios and imagine it really happening in your life right now. In these scenarios, you or partner made a sacrifice for your relationship. Below, please indicate who sacrificed in this scenario:”

- *I sacrificed.*
- *My partner sacrificed.*
- *I don't remember.*

Attention check

“This question is to check whether you are paying attention. Please indicate that you are indeed paying attention by clicking on the option "3" below”.

- 1
- 2
- 3
- 4

Ease of imagination

(To probe how well participants could imagine the scenario)

- How easy did you find it to imagine that these scenarios would happen in your relationship?