



The impact of non-harmonious goals on partner support and taking on opportunities

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Abstract

Romantic partners often support each other to progress toward goals. However, at times partners' goals are not in harmony and conflict with partner or relationship needs, leading to negative consequences for couple members. The present study examined whether non-harmonious opportunities were associated with support provider's and recipient's behavior, perceived partner support, and goal outcomes. We further examined whether these effects were moderated by attachment styles. Findings from two experimental ($n_1 = 296$, $n_2 = 117$) and one dyadic daily diary ($n_3 = 267$) showed how having non-harmonious goals lead to problematic goal pursuit. Partners are less likely to behave positively toward the support provider, provide partner support, view their partners as supportive, and report less commitment to partners, and make less goal progress when goal non-harmony is present. Importantly, we did not find moderation effects of attachment styles for these processes. The findings highlight the importance of managing goal non-harmony in couples.

Keywords Goal Non-Harmony · Partner Support · Attachment · Close Relationships

In close relationships, people often provide support to their partners to help them thrive and pursue life's opportunities (Cappuzzello & Gere, 2018; Feeney & Collins, 2015). This is especially true in romantic relationships, characterized by high interdependence, where individuals interact frequently and have considerable impact on each other's behavior across a wide range of domains (Rusbult & Van Lange, 2003). In addition, couple members can combine resources, which will allow them to potentially achieve more together (Fitzsimons & Finkel, 2018; Fitzsimons et al., 2016). Consistent with this, research has found that individuals make more goal progress when they have supportive partners; they

also experience more relational and personal well-being as a result of partner support (Feeney, 2004; Feeney et al., 2017).

Because partner support is associated with thriving, it is important to understand the factors that hinder or promote such support provision. Herein we aim to address this gap in the literature by examining whether non-harmonious goals or opportunities (i.e., opportunities that conflict or may pose a threat to one's relationship, for example, an opportunity for one member of the dyad to move abroad for work), reciprocity, and sacrifice in relationships predicts partners withholding support or foregoing opportunities. In addition, we aimed to add to the literature by examining whether some people are more threatened than others by non-harmonious opportunities. Specifically, we examined whether adult attachment styles, which have been found to influence responses to threat (Mikulincer & Shaver, 2003), will moderate the association between non-harmonious opportunities and support processes (seeking and providing support, support perceptions, and movement toward and commitment to opportunities). We investigated these questions in three studies to provide converging evidence. Two were experimental and tested causal processes and one dyadic daily diary study data was used to understand how non-harmonious goals were associated with partner support and goal progress daily.

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Thriving through relationships

A recent theoretical model on thriving through relationships (see Fig. 1) describes the interpersonal process whereby both support seekers and providers help create an optimal environment for exploration and pursuit of opportunities in life (Feeney & Collins, 2015). The support process begins when a recipient becomes motivated to seek support from their partner when faced with an opportunity. A partner who is emotionally available and responsive is likely to then provide support toward the recipient's opportunity. Such support, when perceived by the recipient as being effective and responsive, can in turn lead to immediate and long-term thriving outcomes. To date, only a few studies have tested portions of this theoretical framework (Feeney et al., 2017; Tomlinson et al., 2016; Vowels & Carnelley, 2021; Vowels et al., 2022). Additional research is necessary to understand factors that may be associated with the model components. Herein we provide a novel contribution by examining how non-harmonious opportunities may influence the different stages of the partner support process and whether attachment styles moderate the association between non-harmonious opportunities and the stages of the partner support process.

Non-harmonious goals or opportunities in romantic relationships

While relationship partners can facilitate pursuit of life's opportunities, each partners' personal goals may also conflict with interests of the other partner or the relationship. These non-harmonious goals can lead to conflict and withholding of support when both partners' goals cannot be achieved simultaneously or when one partner's goals may trigger a relationship threat. Research shows that goal conflict has been associated with lower personal well-being, relationship quality and commitment (Gere & Impett, 2018; Gere & Schimmack, 2013; Gere et al., 2011; Kelley & Thibaut, 1978; Righetti et al., 2016; Rusbult & Van Lange, 2003), and negatively associated with different stages of the positive support process in a relationship:

openness to receiving support from a partner (Righetti et al., 2014), perceived partner support (Vowels & Carnelley, 2021), and providing support toward a partner's goals (Feeney et al., 2013, 2017; Hui et al., 2014). This may have serious implications for goal progress and achievement, as people are also less likely to make progress toward goals that are non-harmonious for their relationships (Gere & Schimmack, 2013; Gere et al., 2011; Vowels et al., 2022). Recent research showed that people were more likely to devalue or stop pursuing a goal (Gere & Impett, 2018) and reported less motivation toward and commitment to a goal (Vowels et al., 2022) if it was in conflict with their partner's goals. Therefore, we expect that goals or opportunities that are non-harmonious with the partner's or relationship's interests will negative impact all stages of the partner support process.

Given the difficulty of avoiding non-harmony in goal pursuit completely, some level of sacrifice is often necessary to maintain relationships. In general, willingness to sacrifice in relationships has been associated with positive relationship outcomes (Day & Impett, 2018; Impett et al., 2013; Kogan et al., 2010; Van Lange et al., 1997). However, mutuality and reciprocity of sacrifice is important for relationship well-being, as one-sided sacrifice can have detrimental effects for the relationship (Van Lange et al., 1997). Indeed, studies have shown that when partners provide equal support, both couple members experience higher relational and personal well-being (Bar-Kalifa et al., 2017; Gleason et al., 2003). However, we are aware of no research that investigates whether sacrifice or reciprocity affect support processes or goal outcomes. Herein we aim to add to the literature through experimental manipulation of sacrifice and reciprocity across two studies to examine whether they influence support processes or taking on life's opportunities.

Attachment styles and non-harmonious goals

As the thriving through relationships model (Feeney & Collins, 2015) also suggested that adult attachment styles are likely to influence partner support, we expect attachment styles to also influence responses to non-harmonious goals. However, this is yet to be examined empirically. Attachment

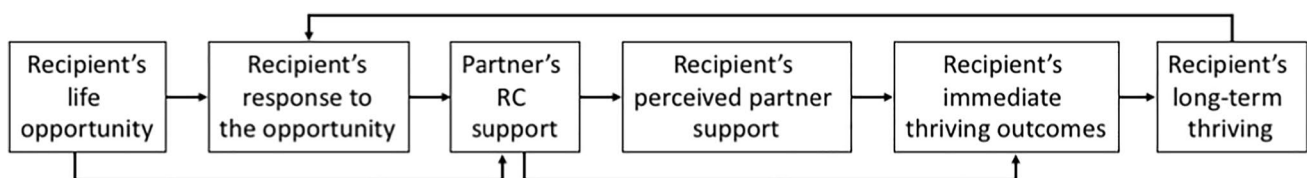


Fig. 1 A graphical representation of the interpersonal process of relational catalyst support. Note. Adapted from (Feeney & Collins, 2015)

styles are internal working models that are based on prior experiences in attachment relationships, which can then serve as templates for future interpersonal interactions with close others. The adult attachment literature differentiates between anxious and avoidant dimensions. Individuals high in attachment anxiety become over-reliant on their close relationships to compensate for negative working models of the self and habitually act in ways to elicit care, support and reassurance from partners (Mikulincer & Shaver, 2012). We expect that because those high in attachment anxiety are especially worried about maintaining closeness in relationships (Mikulincer & Shaver, 2012), they would experience non-harmonious opportunities as a relationship threat. Prior research has shown that individuals high in attachment anxiety are more likely to withhold support from their partner because of perceiving goals as a threat to the relationship (Feeney et al., 2013). Thus, we would expect non-harmonious goals to pose a particular threat to attachment-anxious individuals. In addition, attachment-anxious individuals are likely to forego opportunities for fear that these may interfere with fulfilling their attachment needs (Mikulincer & Shaver, 2007). Therefore, we expect that people with high attachment anxiety are likely to sacrifice their own opportunities for the sake of the relationship but to withhold support from their partner when they view their partner's opportunities as a relationship threat.

In contrast, people high in attachment avoidance, due to their negative working models of others, learn to distrust others' capacity to be supportive and instead become compulsively self-reliant as a defense (Bartholomew, 1990). As support providers, individuals high in attachment avoidance have been shown to be less available support providers (Feeney & Thrush, 2010), are less concerned about opportunities taking their partner away from the relationship and more concerned about partners becoming overly dependent on them (Feeney et al., 2013). Non-harmony may arise if an avoidant individual's partner wishes more support from them toward their opportunities which is in contradiction to the needs of the avoidant partner. Therefore, we expect that individuals high in avoidance will be less supportive compared to secure individuals regardless of whether the goals are non-harmonious or not. Similarly, we expect avoidant individuals (in comparison to secure individuals) to be less concerned about their own opportunities creating non-harmony in their relationships and be more likely to pursue potentially problematic opportunities.

The current research

We aimed to make several meaningful contributions to the literature. First, we deployed a novel experimental paradigm to manipulate goal non-harmony, sacrifice and reciprocity

to determine whether these variables are causally linked to providing partner support or taking on opportunities (novel) in a hypothetical scenario based on another couple (Study 1) and in a hypothetical scenario of the participants' own relationship (Study 2). Second, we aimed to examine the stages of the partner support process by showing in a daily diary study (Study 3) that higher naturally occurring goal non-harmony predicts lower levels of perception (recipients' perspective) and provision of (partners' perspective) partner support, and lower levels of positive goal outcomes. Third, we extended the extant literature by investigating whether attachment styles moderated the association between non-harmonious goals and support processes (Studies 1 and 3; novel). The materials, data, and code for the studies is available on the Open Science Framework (OSF): <https://osf.io/nt3pv/>.¹

Study 1

We used multiple-segment factorial vignettes (MSFVs; (Ganong & Coleman, 2006) to identify contextual and individual characteristics that might influence participants' views toward engagement in opportunities and support from partners. MSFVs use multiple vignette segments in which aspects of the vignette are manipulated to experimentally address whether contextual factors alter people's attitudes (Ganong & Coleman, 2006). As such, they are an ideal way of measuring causal determinants of people's attitudes. Experimental vignettes have been shown to be highly generalizable to "real life" behavior and several studies have found that vignettes can be superior to many other forms of data collection by reflecting participants' intentions and behaviors more closely than data extracted from medical records or from participant observations (Evans et al., 2015; Peabody et al., 2000; Sheringham et al., 2021). To our knowledge, MSFVs have not been used in research of relational support processes.

With Study 1 we aimed to contribute to the literature in various important ways. First, we examined people's views toward support and engagement in life's potential opportunities, which has been relatively understudied thus far. Second, we experimentally manipulated the conditions within the vignettes to discover whether these contextual factors made a difference in people's attitudes toward support and goal pursuit. Third, we examined whether attachment avoidance and anxiety predicted people's attitudes toward partner support and life's potential opportunities. The reasons for taking on opportunities or providing support were evaluated using

¹ The results have been previously presented in a thesis as a partial fulfilment of the first author's PhD.

qualitative methods. We also coded the reasons for support providing based on whether participants endorsed communal (i.e., putting a partner's needs first even if it incurs a cost to the provider without expectation of reciprocity) or exchange norms (Batson, 1993; Mills et al., 2004) in Segment 3 which was concerned with reciprocity and sacrifice. Specifically, in Study 1 we aimed to test the following novel hypotheses using a hypothetical scenario:

1. Participants will be more likely to indicate that the provider should be supportive when goals are harmonious (non-harmonious opportunities hypothesis).
2. Participants will be more likely to indicate that the provider (i.e., the original recipient) should be supportive of the recipient's (i.e., the original provider) opportunities when the provider has been supportive in the past (reciprocity hypothesis).
3. Participants will be more likely to indicate that the recipient should be supportive of the provider's opportunity when the recipient took a non-harmonious opportunity and the provider sacrificed in the past (sacrifice hypothesis).
4. Individuals higher in attachment anxiety (versus lower) will be less likely to indicate that the recipient should take on the opportunity (direct effect), especially when the opportunity is non-harmonious (moderation).
5. Individuals higher in attachment anxiety (versus lower) will be less likely to report that the provider should provide support toward the recipient's opportunity (direct effect), especially when the opportunity is non-harmonious (moderation).
6. Individuals higher in attachment avoidance (versus lower) will be more likely to report that the recipient should pursue their opportunities regardless of goal harmony (only a significant direct effect).
7. Individuals higher (versus lower) in avoidance will be less likely to report that the couple in the vignette should provide support toward each other's opportunities (a direct effect).

Method

The study hypotheses, design, expected sample size, and predetermined analyses were preregistered on the OSF: <https://osf.io/q9f4b/>.²

² Only a very small number of participants responded "no" to whether the provider should provide support toward the recipient's opportunity and whether the recipient should take on the opportunity (0–2.6%). Due to this, we were unable to conduct any of the logistic regression analyses that were preregistered and thus focused only on the continuous outcomes and used sensitivity power analysis to estimate the power in the study.

Participants A total of 362 participants started the survey. Of these participants, 296 completed at least the first segment and were thus included in the analyses. Based on a sensitivity power analysis conducted in G*Power (Faul et al., 2007), we had 90% power to detect an effect size of $f^2 = 0.105$ and 80% power to detect an effect size of $f^2 = 0.087$ (both small to medium). The participants were 21.85 ($SD = 5.66$) years on average. Most of the participants were in a relationship ($n = 103$; with average relationship length 1.59 years, $SD = 3.63$) or single ($n = 129$), heterosexual ($n = 259$), and White ($n = 217$).

Procedure University students from a UK university participated in the study and received course credit as compensation. Participants had to be a minimum of 18 years old, and they were recruited through the university's course credit scheme, via flyers on campus, and via online advertisements (Twitter, Facebook, listservs, blogs). We included participants who were single or in a relationship because the vignette was about a hypothetical couple (rather than their own relationship). This allowed us to probe participants' general attitudes toward support and goals in relationships. Participants were given a link to a survey hosted by Qualtrics. They were asked to report on demographic characteristics and attachment style.

Global attachment orientation was assessed using the Experience in Close Relationships scale (ECR; Brennan et al., 1998), which is a 36-item Likert-type measure in which items are on a scale from 0 (*Strongly Disagree*) to 8 (*Strongly Agree*).³ The scale consists of two subscales of 18 items each: one for anxiety (e.g., "I worry a lot about my relationships", $\alpha = 0.93$) and one for avoidance (e.g., "I don't feel comfortable opening up to others", $\alpha = 0.93$).

Participants then answered a vignette of a hypothetical couple across three segments in which goal harmony, reciprocity, and sacrifice were manipulated (see Fig. 2 for an illustration of the manipulation). In Segment 1, the recipient got an opportunity to pursue an internship and participants were presented with the following scenario:

Alex and Sam have been together for two years since they met in their undergraduate class. Alex has just been offered an internship at a law firm. Alex tells Sam about the internship and wants to discuss whether to take the internship or not.

³ The original rating scale was changed from 1–7 in line with several other published studies (Arriaga et al., 2014) and Study 3 to increase variance in the data.

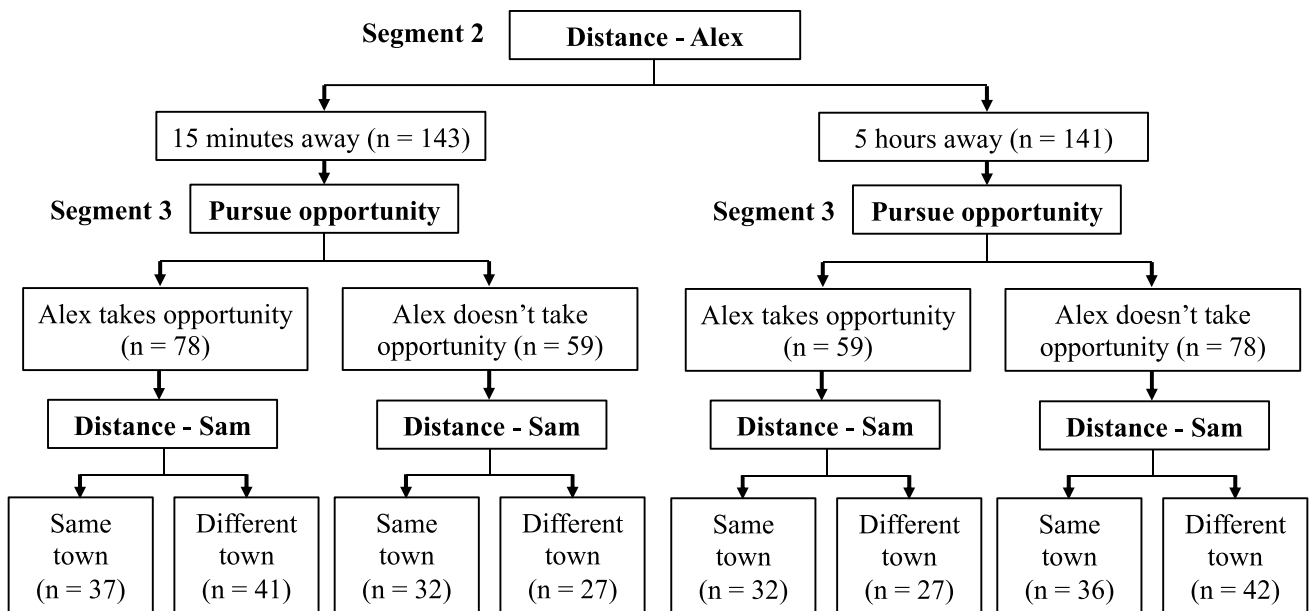


Fig. 2 An illustration of the experimental manipulation in Study 1. Note: The figure provides an illustration of the sequence of the segments and the experimental manipulations that took place at each segment and the actual sample size for each condition for Study 1.

Please note that we only tested for interactions that are relevant for the prespecified hypotheses rather than including all possible interactions in the models. Study 2 followed a similar experimental design but had three levels of goal non-harmony instead of two

In Segment 2, participants were provided further information and were either told that the internship would be close or far away to manipulate goal harmony:

Alex tells Sam that the internship is located “five hours” OR “fifteen minutes” away from where they are currently studying, and it would be a full-time job for six months.

In Segment 3, participants were either told that the recipient takes the opportunity or does not. They were also told that the provider gets an opportunity, which is either harmonious (i.e., close) or non-harmonious (i.e., farther away) with the partner’s goals to address whether participants are more likely to believe that support should be reciprocated and whether the goal harmony affects their reports:

“Alex and Sam decide that the opportunity is too good to pass up and Alex takes the internship” or “Alex and Sam decide that it is not the right time for Alex to take on the opportunity and Alex declines the internship”. A year later, Alex and Sam are back living together in the same town and are about to graduate. Now the other partner, Sam, gets an opportunity to continue studying “in the same town” OR “in a different location”.

After each segment, participants were asked whether they believed Alex (original receiver) should be supportive (*no* or *yes*), how supportive they should be (on a scale from 0 “*Not at all*” to 100 “*Completely*”), and whether Sam (original provider) should take the opportunity (*no* or *yes*). Finally, participants were asked to explain their reasoning for their answers to each question.

Data analysis We analyzed the results using multiple regression in *R* to assess whether the experimental manipulation influence the amount of support. We used a *p*-value of 0.025 (0.05 / 2) to account for multiple testing.

In order to identify reasons for participants’ decisions, open-ended questions about participants’ reasons for their responses were analyzed with content analysis (Hsich & Shannon, 2005). We used two coders to inductively code each response independently and we used the codes to create an initial codebook. The coders then discussed the codebook with the first author, the codebook was refined based on the discussion, and the responses were then recoded based on the final codebook. Cohen’s Kappa was 0.76 for support and 0.54 for opportunity. Any discrepancies in the coding were resolved by the first author. The number of reasons was greater than the number of participants because some participants provided multiple reasons for their responses.

Results

The full results with and without covariates (gender, relationship status, and relationship length) and with and without interaction effects are presented in Table 1. First, we examined whether higher opportunity non-harmony predicted participants report that the provider should be less supportive (H1; non-harmonious opportunities hypothesis). The results supported the hypothesis and showed that when the opportunity was non-harmonious, participants indicated that the provider should be 10.2% ($B = -10.20$ ($SD = 1.65$), $p < 0.001$) and 5.7% ($B = -5.69$ ($SD = 1.92$), $p = 0.003$) less supportive after Segments 2 and 3, respectively. This result was significant in the model with and without covariates. However, this association was no longer significant when

the interactions of attachment anxiety and avoidance with goal non-harmony were included in the model.

Second, we examined whether participants' attitudes toward support changed as a result of the recipient either taking or not taking the opportunity in Segment 2 (H2: reciprocity hypothesis). Participants stated that the recipient should be 5.6% ($B = -5.59$ ($SD = 1.94$), $p = 0.004$) more supportive toward the provider's opportunity when the recipient had taken on the opportunity compared to when the recipient had not taken the opportunity. The result was significant in the first two models but also became non-significant when interactions were included in the model. The results did not support the sacrifice hypothesis (H3); a provider's sacrifice in the past did not influence the participants' reports of whether the recipient should be supportive of the provider's

Table 1 The results for study 1 predicting support providing with and without covariates and interactions

Variables	Basic model			Covariates			Covariates + interactions		
	B (SD)	t	p	B (SD)	t	p	B (SD)	t	p
Model 1 (Segment 2, $n = 273$)	$\Delta R^2 = .12$			$\Delta R^2 = .12$			$\Delta R^2 = .12$		
Intercept	95.53 (1.16)	82.06	< .001	94.92 (3.45)	27.55	< .001	93.65 (4.19)	22.37	< .001
Goal non-harmony S2	-10.20 (1.65)	-6.19	< .001	-10.39 (1.66)	-6.27	< .001	-8.62 (4.92)	-1.75	.081
Avoidance				-0.01 (0.60)	-0.01	.993	-0.35 (0.81)	-0.43	.669
Anxiety				-0.73 (0.57)	-1.29	.198	-0.08 (0.86)	-0.09	.929
Gender				2.34 (2.18)	1.08	.283	2.26 (2.18)	1.04	.301
Relationship status				1.32 (1.92)	0.69	.493	1.26 (1.93)	0.65	.515
Relationship length				0.38 (0.25)	1.50	.136	0.40 (0.26)	1.58	.116
Avoidance \times goal non-harmony							0.71 (1.16)	0.61	.512
Anxiety \times goal non-harmony							-1.14 (1.12)	-1.02	.311
Model 2 (Segment 3)	$\Delta R^2 = .06$			$\Delta R^2 = .09$			$\Delta R^2 = .07$		
Intercept	97.37 (1.83)	52.22	< .001	99.08 (4.13)	24.01	< .001	99.36 (4.56)	21.77	< .001
Pursue	-5.59 (1.94)	-2.89	.004	-5.64 (1.92)	-2.94	.004	-5.32 (3.81)	-1.40	.164
Goal non-harmony S3	-5.69 (1.92)	-2.97	.003	-5.53 (1.91)	-2.90	.004	-5.96 (3.54)	-1.68	.093
Goal non-harmony S2	1.45 (1.94)	-0.75	.455	-1.47 (1.92)	-0.77	.443	-2.37 (3.73)	-0.64	.525
Avoidance				-0.75 (0.67)	-1.10	.275	-0.76 (0.69)	-1.10	.274
Anxiety				-1.37 (0.64)	-2.13	.034	-1.37 (0.65)	-2.10	.037
Gender				5.62 (2.47)	2.27	.024	5.61 (2.50)	2.24	.026
Relationship status				1.05 (2.20)	0.48	.633	1.10 (2.23)	0.50	.621
Relationship length				0.09 (0.29)	0.32	.750	0.10 (0.29)	0.33	.742
Pursue(0) \times Goal non-harmony S3							-1.17 (5.48)	-0.21	.831
Pursue(0) \times Goal non-harmony S2							-0.03 (5.43)	-0.005	.996
Pursue \times Goal non-harmony S2 \times S3							1.56 (5.40)	0.29	.773

We have included gender (1 = woman, 0 = man), relationship status (0 = single, 1 = in a committed relationship) and relationship length (continuous, if not in a relationship, participants were assigned 0) as covariates. Goal non-harmony S2 refers to whether the recipient's goal was non-harmonious for the partner in segment 2 (0 = harmonious, 1 = non-harmonious), Pursue refers to whether the recipient took the opportunity (0 = did not take opportunity, 1 = took the opportunity), Goal non-harmony S3 refers to whether the partner's goal was harmonious for the recipient in segment 3 (0 = low goal non-harmony, 1 = high goal non-harmony). The non-harmonious opportunity hypothesis is addressed in Model 1 in which participants read either a low opportunity non-harmony (vs. high opportunity non-harmony) segment and the reciprocity hypothesis is addressed in Model 2 in which participants either find out that the recipient took the opportunity (vs. did not take the opportunity). The sacrifice is assessed with the *pursue \times goal non-harmony S2 \times goal non-harmony S3* interaction in which the recipient pursued the non-harmonious opportunity in the past (i.e., their partner had to sacrifice) and now the partner's goal is non-harmonious so the recipient would need to sacrifice in turn. Including or excluding covariates (gender, relationship status, relationship length) did not change the model outcomes

opportunity when the recipient had taken an opportunity in the past. As expected, the results did not show any evidence of attachment avoidance moderating the participants' responses (H6-H7). However, attachment anxiety was also not a significant moderator (H4-H5).

Qualitative results

For the qualitative results (see Table 2 for the full results), we coded reasons for ratings of providing support into four categories: pros and cons of job, unconditional support, relationship worries, and non-interference. In Segment 3, participants' responses were also coded into communal vs. exchange norms based on their responses on whether the second partner should take an opportunity, or the second partner's opportunity should be supported. Overall, participants were the most likely to consider pros and cons of the job when the opportunity was not difficult for the relationship (harmonious opportunity) but when the job opportunity was difficult (non-harmonious opportunity), participants were the most likely to endorse unconditional support and non-interference as reasons for providing support. In the low difficulty condition, participants were the most likely to endorse goal- and relationship-related reasons for taking on an opportunity but were the most focused on the recipient of the opportunity when the opportunity was non-harmonious. In other words, when the opportunity was in harmony with the relationship, participants focused on

the good aspects of the opportunity and it being good for the relationship to justify support and taking on the opportunity. However, when facing an opportunity that could pose a threat to the relationship harmony, participants justified support and taking on opportunities by it being good for the recipient and relationships should not interfere and support in relationships should be unconditional. When one partner had taken an opportunity, participants were more likely to endorse exchange norms regardless of whether the opportunity was harmonious or not. However, when one partner had not taken an opportunity, participants were more likely to endorse communal norms regardless of whether the goal was harmonious or not.

Discussion

The results supported Hypotheses 1 and 2, which suggests that people are more likely to expect others to be supportive when opportunities are harmonious with a partner's or relationship's goals but less supportive when opportunities are non-harmonious. There was also an expectation of reciprocity the participants believed that people should reciprocate support when one partner had been supportive in the past. However, there was no evidence of a direct or interaction effect of attachment anxiety or avoidance. It may be because participants were presented with a hypothetical couple and thus may not have experienced the scenario as a threat. Therefore, we designed Study 2 to test this possibility. The

Table 2 The results from content analysis for Study 1

Reason	Segment 1	Segment 2		Segment 3			
		Harmonious	Non-harmonious	Harmonious + no opportunity	Harmonious + takes opportunity	Non-harmonious + no opportunity	Non-harmonious + takes opportunity
Support							
Pros and cons of job	32	75	26	15	12	5	7
Unconditional support	96	22	37	10	17	10	8
Relationship worries	11	3	9	1	0	0	0
Non-interference	135	24	50	6	1	4	5
Communal				15	11	25	10
Exchange				5	20	8	28
Opportunity							
Goal	67	69	42	27	25	16	18
Recipient	178	36	62	23	32	32	28
Partner	2	0	0	1	0	1	2
Relationship	11	95	13	1	2	2	5
Communal				1	0	2	0
Exchange				1	6	2	4

The numbers in the table refer to how many participants in each condition endorsed a particular reason. Harmonious/non-harmonious refer to the opportunity and no opportunity/takes opportunity refer to whether the first partner took the opportunity or not. Segment 3 also included coding for communal vs. exchange norms

qualitative results showed that participants focused on the goal as reasons to justify support and taking on opportunities when the goal did not pose a threat to the relationship, but they endorsed the relationships needing to be non-interfering and unconditionally supportive when the opportunity was non-harmonious (and at baseline when there was no information on harmony of the opportunity). The results also showed that when participants were primed with a sacrifice (i.e., not taking a goal), they were more likely to endorse communal norms than when they were primed with taking on opportunity (i.e., not sacrificing) in which instance they were more likely to endorse exchange norms. Interestingly, when deciding whether one should take an opportunity or not, hardly any participants mentioned the partner in their reasoning for why someone should or should not be supportive or take on opportunities. Instead, participants considered goal, recipient, or relationship-related factors.

Study 2

Study 2 extended the methodology from Study 1 in several ways. Instead of a hypothetical couple, participants in romantic relationships responded to questions about their own relationship. Goal harmony was also varied on three levels and expected that more non-harmonious opportunities would result in less support and providers would be less likely to say the recipient should take an opportunity. We also examined the robustness of the MSFV methodology by examining whether who got the opportunity first (participant or their partner) and whether thinking about potential reasons for the participants' responses prior to responding to the questions influenced participants' responses. We examined the following hypotheses:

1. Participants will be more likely to indicate that a) the provider should be supportive and b) recipient should take an opportunity when there is high goal harmony. (non-harmonious opportunity hypothesis)
2. Participants will be more likely to indicate that a) the recipient should be supportive and b) provider should take the opportunity when the provider has been supportive in the past. (reciprocity hypothesis)
3. Individuals higher in attachment anxiety (versus lower) will be less likely to say that the recipient should take on the opportunity (direct effect), especially when the opportunity is non-harmonious (moderation).
4. Individuals higher in attachment anxiety (versus lower) will be less likely to say that the provider should provide support toward the recipient's opportunity (direct effect), especially when the opportunity is non-harmonious (moderation).

5. Individuals higher in attachment avoidance (versus lower) will be more likely to say that the recipient should pursue their opportunities regardless of goal harmony (only a significant direct effect).
6. Individuals higher (versus lower) in avoidance will be less likely to indicate that the couple in the vignette should provide support toward each other's opportunities (a direct effect).

Method

Participants Participants had to be minimum of 18 years of age and in a relationship for at least six months to be eligible for the study. A total of 162 participants started the study and 117 completed all questions and were thus included in the analyses. Participants were on average 19.7 ($SD=1.64$) years. The majority were in a committed relationship ($n=97$) with a minority dating ($n=16$) or cohabiting ($n=4$). The participants had been in a relationship for an average of 1.83 ($SD=1.22$) years and were primarily heterosexual ($n=104$) and white ($n=98$).

Procedure University students from a UK university were recruited and received course credit upon completion of the survey. We recruited only participants in a relationship because the vignette asked about their attitudes toward a hypothetical scenario in their own relationship. Participants were provided with a link to a survey hosted on Qualtrics platform in which they were asked to complete the same demographic questions. The participants were also asked to complete a 16-item *Balanced Inventory of Desirable Responding – Short form* (BIDR-16; (Hart et al., 2015)). Participants then completed a vignette similar to Study 1 except that the vignette was about a hypothetical scenario of their own relationship five years in the future. The participants were presented with a vignette in three segments. In Segment 1 one partner received an opportunity with no further information given (baseline). In Segment 2 the participant learnt that the opportunity was either low, medium, or high in goal non-harmony. Finally, in Segment 3 the participants learnt that the recipient had taken or not taken the opportunity followed by the original provider receiving an opportunity which was either low, medium, or high in goal non-harmony. Additionally, half of the participants were randomly assigned to a group in which they themselves got an opportunity first (i.e., were the recipient) with their partner getting an opportunity second (i.e., the partner was the provider first and then became the recipient in Segment 3) and the other half of the participants were assigned to a group in which their partner got an opportunity first with the participant themselves getting an opportunity second. In the second part of the random assignment, participants were asked to provide their reasoning for their answers to each question

either before (group 1) or after (group 2) responding to the closed questions.

Data analysis The study sample size was small and the variances across groups were unequal. Thus, we analyzed the results using robust one-way ANOVA from the *userfriendlyscience* package (Peters, 2017) in *R*. For significant main effects, Games-Howell post-hoc tests were conducted to account for heterogeneity of the variances across groups. First, we tested the robustness of the MSFV methodology by analyzing whether there was an effect of rating order for support and opportunity outcome variable for each segment (six analyses) and for any effect of who got the opportunity (self vs. partner) on the outcome variables across all segments (six analyses). After this, we then for the effect of goal non-harmony in Segments 2 and 3 for support and taking on opportunity (four analyses). We used a Bonferroni corrected *p*-value of 0.005 (0.05 / 10) to test for statistical significance due to multiple testing. Based on a sensitivity power analysis, we had 80% power to detect a moderate to large effect ($f=0.34$). We reran the analyses of Study 2 using the same regression analyses as in Study 1 including the moderator effects. Participants also responded to open-ended questions about the reasons for their responses, which were coded the same way as in Study 1. Cohen's Kappa ranged between 0.82 and 1.00 for the responses.

Results

Preliminary analyses First, we examined whether rating order was a significant predictor of participants' responses to how supportive partners should be and how likely they would be to take an opportunity. In Segment 1, participants who first provided reasons for why they or their partner should or should not take an opportunity ($M=62.33$, $SD=16.43$) were significantly less likely to say they or their partner should take the opportunity compared to participants who provided reasons after their rating ($M=75.54$, $SD=23.60$), $F(1, 115)=12.31$, $p<0.001$, $\omega^2=0.09$. The rating order was not significant for opportunity in Segment 2 ($p=0.470$) or 3 ($p=0.126$). For support, the rating order was not significant on any of the segments ($ps=0.201$ – 0.738). Therefore, we did not control for rating order in further analyses. Second, we tested whether participants differed in their responses for support and opportunity depending on whether they were reporting on themselves or their partner getting an opportunity. The results were not significant for support ($ps=0.022$ – 0.944) or for opportunity ($ps=0.010$ – 0.059) across any of the three segments. None of the analyses testing whether social desirability predicted participants' responses to support and taking on opportunity were significant. We also found no significant differences across groups for support ($p=0.602$)

or for opportunity ($p=0.548$) at baseline (Segment 1) based on the participants' responses to goal non-harmony in Segment 2 thus showing the participants did not differ across groups before the manipulation.

Non-harmonious goals hypothesis We tested whether goal non-harmony influenced participants' responses in Segments 2 and 3. There was a significant main effect of opportunity non-harmony on support in Segment 2, $F(2, 114)=36.44$, $p<0.001$, $\omega^2=0.38$ (H1). Participants in the low opportunity non-harmony condition rated expected support highest ($n=39$; $M=94.87$, $SD=13.08$) followed by those in the medium opportunity non-harmony condition ($n=40$, $M=81.60$, $SD=12.26$). Participants in the high opportunity non-harmony condition ($n=38$, $M=61.47$, $SD=24.19$) rated the support lowest (all $ps<0.001$). The post-hoc tests showed that participants in the medium opportunity non-harmony condition reported the likelihood of providing support 13.3% lower whereas participants in the high opportunity non-harmony condition rated the likelihood 33.4% lower compared to those in the low opportunity non-harmony condition. The difference between medium opportunity non-harmony and high opportunity non-harmony conditions was 20.1%. Attachment anxiety or avoidance were not significant as predictors or moderators or change the results (see Table S1 in supplemental material for the results).

The results were the same for opportunity, $F(2, 114)=36.57$, $p<0.001$, $\omega^2=0.38$ (H8). Participants in the low opportunity non-harmony condition rated taking goal opportunity highest ($M=91.69$, $SD=14.16$) followed by those in the medium opportunity non-harmony ($M=76.08$, $SD=20.68$) condition. Participants in the high opportunity non-harmony condition ($M=51.66$, $SD=25.73$) rated the support lowest. The post-hoc tests showed that participants in the medium opportunity non-harmony condition rated the likelihood of taking the opportunity 15.62% lower whereas those in the high opportunity non-harmony condition rated the likelihood 40.03% lower compared to those in the low opportunity non-harmony condition. The difference between medium opportunity non-harmony and high opportunity non-harmony was 24.42% (all $ps<0.001$). Attachment anxiety or avoidance were not significant as predictors or moderators and their inclusion in the model did not change the results.

In Segment 3, there was also a significant main effect of opportunity non-harmony on support, $F(2, 114)=12.48$, $p<0.001$, $\omega^2=0.16$. Participants in the low opportunity non-harmony condition rated support highest ($n=38$, $M=92.13$, $SD=13.54$) followed by those in the medium opportunity non-harmony ($n=41$, $M=87.46$, $SD=13.10$) condition. Participants in the high opportunity non-harmony condition ($n=38$, $M=74.47$, $SD=20.48$) rated the support lowest. The post-hoc tests showed that only the participants

in the high opportunity non-harmony condition significantly differed from the low opportunity non-harmony condition with participants in the high opportunity non-harmony condition rating support 17.66% lower compared to those in the low opportunity non-harmony condition ($p < 0.001$). Participants in the medium opportunity non-harmony condition rated support 4.67% higher and did not significantly differ from those in the low opportunity non-harmony condition ($p = 0.271$). Participants in the medium opportunity non-harmony condition rated support 12.99% higher compared to those in the high opportunity non-harmony condition ($p = 0.004$). These results were in the expected direction but no longer significant after controlling for attachment style as a moderator ($B = -9.11$, $p = 0.07$). Attachment anxiety and avoidance were not significant as predictors or moderators.

There was also a significant main effect of opportunity non-harmony on opportunity in Segment 3, $F(2, 114) = 11.60$, $p < 0.001$, $\omega^2 = 0.15$. Participants in the low opportunity non-harmony condition rated support highest ($M = 87.21$, $SD = 15.93$) followed by those in the medium opportunity non-harmony ($M = 79.41$, $SD = 21.18$) condition. Participants in the high opportunity non-harmony condition ($M = 64.66$, $SD = 24.28$) rated the support lowest. The post-hoc tests showed that only the participants in the high opportunity non-harmony condition significantly differed from the low opportunity non-harmony condition with participants in the high opportunity non-harmony condition rating support 22.6% lower compared to those in the low opportunity non-harmony condition ($p < 0.001$). Participants in the medium opportunity non-harmony condition rated support 7.8% higher compared to those in the low opportunity non-harmony condition, but this difference was not significant ($p = 0.159$). Participants in the medium opportunity non-harmony condition rated support 14.8% higher compared to those in the high opportunity non-harmony condition, but the difference was not significant after Bonferroni correction was applied ($p = 0.015$). These results were in the expected direction but no longer significant after controlling for attachment style as a moderator ($B = -13.07$, $p = 0.04$). Attachment anxiety or avoidance were not significant as predictors or moderators.

Reciprocity hypothesis

The reciprocity hypothesis was not supported in Study 2: the difference between groups in which one partner had taken an opportunity in the past compared to the group in which partner did not take the opportunity in Segment 3 did not significantly differ in the level of support ($F(1, 115) = 0.18$, $p = 0.675$, $\omega^2 = 0.00$; H2) or taking on opportunity ($F(1, 115) = 0.18$, $p = 0.672$, $\omega^2 = 0.00$; H9).

Qualitative results

For the qualitative results (see Table 3 for the full results), we coded the reasons into the same categories. However, all participants endorsed communal rather than exchange norms and thus we did not code for these separately and these were coded into unconditional support. Overall, participants were the most likely to endorse unconditional support toward each other's opportunities. In the low opportunity non-harmony condition, none of the participants mentioned relationship worries but relationship worries increased as opportunity non-harmony increased. Many participants mentioned pros and cons of the opportunity. Furthermore, the categories were divided into goal, recipient, partner, or relationship-related reasons to examine reasons for taking on opportunity. Partner-related reasons for a decision on whether a partner should take an opportunity were rarely mentioned. Most participants considered the relationship as their main motivation for why one partner should not take the opportunity and were likely to endorse recipient and/or goal-related reasons for why one partner should take an opportunity.

Discussion

The purpose of Study 2 was to examine the impact of opportunity non-harmony on support and taking on opportunities in a hypothetical future scenario of participants' own relationship. We replicated the results from Study 1 for opportunity non-harmony. As expected, we found that participants rated support and likelihood of taking on opportunity the lowest when there was a high opportunity non-harmony regardless of whether the opportunity was theirs or their partner's. The effect of opportunity non-harmony was also large with participants in the high opportunity non-harmony condition being up to 33% less supportive of the opportunity and up to 40% less likely to say that they themselves or their partner should take an opportunity. However, the reciprocity hypothesis was not supported: one partner having had an opportunity in the past did not affect participants' responses on support or opportunity. Additionally, neither attachment anxiety nor attachment avoidance were significant moderators or predictors across the analyses. The qualitative results provided further insight into how participants made their decisions on providing support or taking on opportunities. Study 2 added to the literature by showing that experimentally manipulated goal non-harmony is detrimental for support and taking on opportunities with a large effect size.

Study 3

Studies 1 and 2 added to the present literature by providing experimental evidence using a novel and innovative methodological technique to show that goal non-harmony

Table 3 The results from content analysis for Study 2 with reasons reported second and reasons thought of first

Reason	Segment 1	Segment 2			Segment 3			Segment 3	
		Harmonious	Somewhat non-harmonious	Very non-harmonious	Harmonious	Somewhat non-harmonious	Very non-harmonious	No opportunity	Takes opportunity
Support									
Pros and cons of job	6	12	9	15	5	5	4	7	7
Unconditional support	51	8	6	3	15	12	4	15	16
Relationship worries	1	0	8	3	0	5	9	8	6
Non-interference	3	0	2	0	0	0	0	0	0
Opportunity									
Goal	17	9	4	2	7	9	4	11	9
Recipient	35	7	11	11	11	10	5	12	14
Partner	1	0	1	2	0	0	1	0	1
Relationship	10	6	6	5	2	6	9	8	9
Reasons Reported First					yes/no	yes/no	yes/no	yes/no	yes/no
Opportunity									
Goal	22/22	7	3	5	12/5	7/1	1/2	13/2	13/6
Recipient	34/24	8	3	7	6/4	10/6	7/1	13/5	15/6
Partner	1/2	1	5	3	0/0	0/1	12/0	0/0	0/1
Relationship	8/20	4	9	10	4/7	3/2	2/18	3/21	4/14

The numbers in the table refer to how many participants in each condition endorsed a particular reason. In reasons reported second, participants were first asked to rate how supportive they think the provider should be and whether the recipient should take the opportunity and then asked to provide their reasoning for their responses. In reasonstought of first, the participants were first asked to think about reasons for why the recipient should take the opportunity (yes) and why they should not take the opportunity (no) and then asked to rate how supportive they think the provider should be and whether the recipient should take the opportunity

is detrimental to both support and taking on opportunities. While the first two studies provided experimental evidence of the negative impact of non-harmonious opportunities for support processes, the situations presented to participants were hypothetical. We wanted to add ecological validity by examining whether non-harmonious goals were detrimental in reality. Thus, in Study 3, we examined whether daily goal non-harmony predicted support and goal outcomes in a sample of couples. Specifically, Study 3 examined whether non-harmonious goals predicted the interpersonal processes of partner support: support recipient’s behavior, support providing, perceived partner responsiveness, and commitment toward opportunities. We expected that goal non-harmony would be negatively associated with all four core processes as partners are motivated to avoid threats to the relationship. Specifically, we expected that recipients’ perception of goal non-harmony would be negatively associated with recipient’s responses to partner’s support providing (H1), perceived support (H2), and movement toward goals (H3). We also expected that partner’s perception of goal non-harmony would be negatively associated with support providing (H4). Previous research has shown that goal non-harmony is associated with motivation to

provide, or not provide, support (Feeney et al., 2013, 2017) but whether goal non-harmony predicts actual support providing has not been examined in previous studies adding to the novelty of Study 3. We also added to the literature by examining whether there are differences between non-harmonious goals that threaten partner’s or the relationship’s goals. We did not make any a priori predictions for partner effects.

Furthermore, we expected that when goal non-harmony is high, higher levels of attachment anxiety will negatively predict perception of support (H5) as well as motivation toward goal pursuit (H6). We expected that when goal non-harmony is high, individuals higher (vs. lower) in attachment avoidance will seek less support (H7). Furthermore, while individuals lower (vs. higher) in attachment avoidance will be less motivated to pursue goals, those higher in attachment avoidance will be unaffected and therefore we expected this association to be positive (H8). We also expected that when partners high (vs. low) in attachment anxiety perceive goals as conflicting, they will provide less support (H9). We expected all other moderator effects to be non-significant but include them in the model as controls. Please see Fig. 3 for a graphical illustration of the proposed predictions.

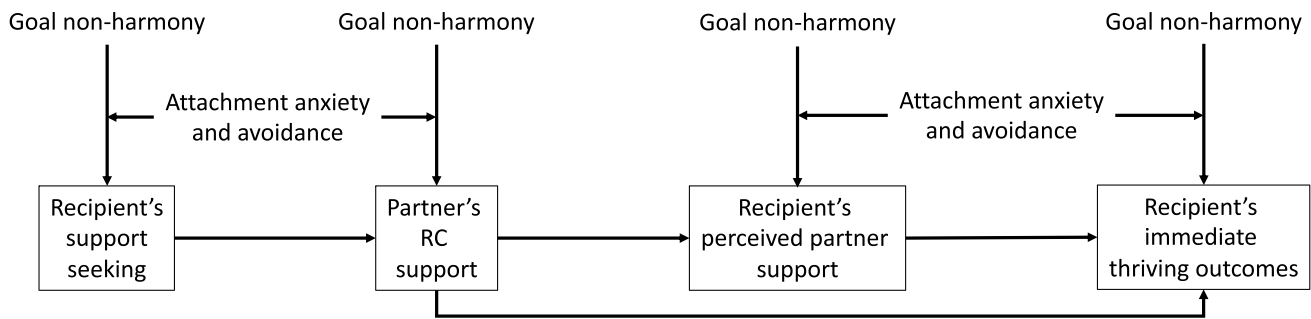


Fig. 3 Proposed associations between parts of the relational catalyst support model, goal non-harmony, and attachment styles

Method

The design, hypotheses, and planned analyses were preregistered on the OSF framework: <https://osf.io/gqrc9/>

Participants The study used daily diary data (completed during Wave 3) of an existing five-wave longitudinal study of 187 romantic couples.⁴ At Time 1, participants were 25.01 years old on average ranging from 17–47 years. Couples had been involved with each other for 38 months on average ($SD = 24.62$), were either dating steadily (25.4%), engaged (29%), or married (37.7%), with the majority living together (82%) with no children (94.3%). Participants were mostly white (84.4%) and half were students (49.5%). At T3 when the diary data were collected, 133 couples and one individual participated in the daily diary and were included in the present study.

Procedure Couples were recruited via community announcements in a southeastern US city. They were eligible to participate if they were newly committed (i.e., either moved in together or gotten married) and agreed to participate in a two-year, five-wave longitudinal study. For details of the procedure, see Righetti et al., (2010). Waves were completed six months apart, with couples completing questionnaires either before or during a lab session. At T3, participants completed a set of questionnaires during a lab session. After the lab session, participants completed an 8-day daily diary in which they were asked to report partner support, goal pursuits, and goal non-harmony each day. Couples were paid \$60 for participating in the laboratory session and further \$60 for completing the daily diary.

⁴ A full list of published studies and measures including in the dataset can be found on the OSF project page: <https://osf.io/nt3pv/>. The recommendation for a required power for models using the actor-partner interdependence model is at least 100 couples for observed variables (Ledermann & Kenny, 2017). Furthermore, based on a simplified power calculation using the APIM power, we had 99.9% power to estimate a medium effect size for actor and partner effects. Therefore, we expected that our sample size was adequate.

Measures Attachment anxiety and avoidance were measured once at baseline using a shortened 18-item version derived from the Experience in Close Relationships – Revised Scale (ECR-R; Fraley et al., 2000), which consisted of two 9-item Likert scales (0 = *Do Not Agree at All* to 8 = *Agree Completely*), one for anxiety ($\alpha = 0.88$) and one for avoidance ($\alpha = 0.89$). The daily measures were all rated on a scale from 1 (*Do Not Agree at All*) to 5 (*Agree Completely*). Goal non-harmony was measured separately for goals being problematic with partner’s goals (“*Pursuing my goals caused problems for my partner [was unpleasant, required effort, caused difficulties]*”) and relationship’s goals (“*Pursuing my goals caused problems for our relationship [limited time together, we disagreed, felt distant]*”). The support recipient’s behavior toward partner was measured using a five-item scale (e.g., “*I showed my partner that I appreciated his/her support of my goal pursuits.*”, $\alpha = 0.80$). Perception of partner support was measured using an eight-item scale (e.g., “*My partner displayed confidence that I can achieve my goals.*”, $\alpha = 0.94$), and providing support was measured using the same items but asked about the participant themselves (e.g., “*I displayed confidence that my partner can achieve his/her goals.*”, $\alpha = 0.94$). Movement toward goals was measured using three items (e.g., “*I feel close to attaining my goals.*”, $\alpha = 0.79$).

Data analysis We used multilevel modeling using the Actor-Partner Interdependence Model in which partners were nested within dyads and days were crossed within partners resulting in two levels of random variation (Kenny et al., 2006). We included both random intercepts and random slopes in the models. All predictor and moderator variables were grand mean centered. Both partners’ perceptions of goal non-harmony (both goal non-harmony with partner and goal non-harmony with relationship) and both partners’ attachment styles (and moderation) were included in the models to predict a) support recipient’s behavior, b) support providing, c) perceived responsiveness, and d) goal pursuit/movement. The results are reported with and without attachment styles. In separate analyses, we also tested for lagged

effects by including yesterday's goal non-harmony to predict the next day's outcomes. Time was included as a control variable in all analyses. We used a Bonferroni-corrected alpha level of $p < 0.013$ ($0.05 / 4$) due to multiple testing.

Results

The correlations between the study variables can be found in Table S2 in supplemental file and the full results in Table 4. We expected that higher relationship and/or partner goal non-harmony would be negatively associated with all four stages of the partner support process: support recipient's behavior (H1), perceived support (H2), movement toward goals (H3), and support providing (H4). The results supported the hypotheses and showed that higher recipient's perception of relationship goal non-harmony predicted less positive behavior by the support recipient, perception of support, movement, and support providing. Partner effects for relationship goal non-harmony were also significant for receiving and providing support but not for seeking support or movement. Partner goal non-harmony (i.e., goal non-harmony between recipient's and partner's needs rather than relationship's needs) was not a significant predictor in any of the analyses. None of the lagged effects were significant in the lagged effects analyses.

None of the predicted results for individual differences in attachment styles moderating the association between goal non-harmony and partner support processes were significant (H5-H9). The only significant moderation showed that attachment anxiety moderated the association between partner goal non-harmony and support recipient's behavior ($B = 0.06$ ($SE = 0.02$), $p < 0.001$). On days when goal non-harmony was higher, participants higher in attachment anxiety ($B = 0.12$ ($SE = 0.04$), $t = 3.40$, $p < 0.001$) perceived themselves as behaving more positively toward partner compared to participants lower in attachment anxiety ($B = -0.09$ ($SE = 0.04$), $t = -2.55$, $p = 0.011$). However, this association was exploratory and thus this finding should be interpreted with caution.

Discussion

In a dyadic daily diary study, Study 3 added ecological validity to Studies 1–2's findings and provided evidence suggesting that daily goal non-harmony was detrimental to support and goal outcomes. The results supported the hypotheses and showed that higher relationship goal non-harmony significantly predicted more negative behavior by the support recipient as well as both lower perceived and provided support. Interestingly, partner goal non-harmony was not a significant predictor of any of the outcomes after accounting for relationship goal non-harmony. These findings add to the literature in several important ways: a) by adding ecological validity to Studies 1 and 2; b) by suggesting that individuals prioritize relationship's needs above each partner's

needs; and c) by showing that non-harmonious goals also predict actual support provision, not just perceived support.

General discussion

Romantic partners can provide support for each other's opportunities which can enable exploration and growth. Nonetheless, there are times when the goals or opportunities of one member of the dyad do not harmonize with the interests of the other. Goal non-harmony can create goal conflict or the perception that the relationship is under threat as the non-harmonious goals or opportunities may move the members of a couple away from each other. Across three studies using multiple and novel methods, we showed that opportunity non-harmony was detrimental to all aspects of partner support: support seeker's behavior toward partner, perceived support, provided support, as well as thriving outcomes (taking on opportunities in Studies 1 and 2; and commitment, motivation, and progress toward opportunities in Study 3). Studies 1 and 2 provided experimental evidence showing that participants who were presented with a high opportunity non-harmony scenario became up to 40% more negative in their attitudes toward support and taking on potential opportunities compared to participants who were presented with a low goal non-harmony scenario.

While the novel experimental paradigms allowed for the examination of causal relationships, we in addition conducted correlational studies to increase the ecological validity of our findings. Study 3 used intensive longitudinal methods showing that daily instances of goal non-harmony predicted support processes in couples. Of note, the results suggested that goal non-harmony in relationships, and not partner goal non-harmony, predicted support and goal outcomes. This finding was consistent with the results from the qualitative analyses reported in Study 2 which showed that most participants considered the relationship perspective and did not evaluate opportunities from the partner's perspective. In conjunction, these three studies provide consistent evidence that higher goal non-harmony is negatively related to support processes and predicts lower goal outcomes.

The results both support and extend the literature on interpersonal components of goal pursuit and the thriving through relationships framework (Feeney & Collins, 2015). The research reported herein showed that high goal non-harmony potentially poses a threat to close relationships by creating a sub-optimal environment for pursuit of important goals. Goal non-harmony renders partners to be less likely to provide support and recipients to be less likely to seek support from their partner, to view their partners as being less supportive, and to make less progress toward their goals. The findings are a conceptual replication of previous

Table 4 The Actor-Partner Interdependence Model Results for Goal Non-Harmony as a Predictor of Support Recipient's Behavior, Received Support, Provided Support, and Movement for Study 3

Predictors	Support recipient behavior			Received Support			Provided Support			Movement		
	Estimates	CI	p	Estimates	CI	p	Estimates	CI	p	Estimates	CI	p
Intercept	3.72	3.62 - 3.81	< 0.001	3.69	3.56 - 3.81	< 0.001	3.69	3.56 - 3.81	< 0.001	3.78	3.66 - 3.90	< 0.001
Partner goal non-harmony _R	0.01	-0.04 - 0.06	0.674	0.07	0.01 - 0.13	0.032	-0.01	-0.07 - 0.06	0.837	-0.03	-0.09 - 0.02	0.245
Relationship goal non-harmony _R	-0.14	-0.18 - -0.09	< 0.001	-0.18	-0.24 - -0.11	< 0.001	-0.09	-0.16 - -0.03	0.005	-0.07	-0.11 - -0.02	0.006
Partner goal non-harmony _P	-0.02	-0.06 - 0.03	0.440	-0.01	-0.07 - 0.06	0.836	0.07	0.01 - 0.13	0.032	-0.02	-0.06 - 0.03	0.493
Relationship goal non-harmony _P	-0.05	-0.09 - -0.00	0.030	-0.09	-0.16 - -0.03	0.005	-0.18	-0.24 - -0.11	< 0.001	-0.01	-0.06 - 0.04	0.784
Time	0.02	0.00 - 0.03	0.016	-0.00	-0.02 - 0.02	0.966	-0.00	-0.02 - 0.02	0.966	0.03	0.01 - 0.05	< 0.001
Random Effects												
ICC	0.51			0.34			0.33			0.45		
N	113			113			113			113		
Observations	1520			1528			1528			1602		
Marginal R ² / Conditional R ²	0.061 / 0.536			0.036 / 0.366			0.035 / 0.358			0.027 / 0.465		

Marginal R² only includes the fixed effects while the conditional R² also includes the random effects model. R = recipient's perception of goal non-harmony, P = provider's perception of goal non-harmony

research but result from a more rigorous choice of methods. In support of previous studies, our findings show that partners are less likely to provide support when they perceive relationships threats from their goals (Feeney et al., 2013, 2017; Hui et al., 2014), recipients perceive their partners as less supportive (Vowels & Carnelley, 2021), and recipients make less movement towards and become less motivated toward their goals when the goals are difficult for the partner or the relationship (Gere & Schimmack, 2013; Gere et al., 2011; Vowels et al., 2022). As responsive support and making progress toward one's goals predict better relational and individual well-being (Feeney, 2004; Tomlinson et al., 2016), it is important to specify potential threats to a supportive environment. We experimentally manipulated the circumstances in Studies 1 and 2, in order that we could draw causal conclusions and provide qualitative data to add richness to the results; and we examined both members of the couple dyad, rather than just one, in a daily diary which increased the ecological validity of the results in Study 3. Our reported research, however, examined only the short-term effects of goal non-harmony on support processes. Future longitudinal research along the lines of that reported here might lead to a better understanding of the long-term effects of goal non-harmony on relationships.

Our data showed that goal non-harmony can undermine the potential role of close relationships to serve as a launching function for goal pursuit. Repeated exposure to goal non-harmony may be harmful for close relationships because such discord provides interdependent dilemmas that test partners' commitment to each other (Kelley & Thibaut, 1978; Rusbult & Van Lange, 2003). On this basis, the specification of methods that might mitigate the negative impact of goal non-harmony would appear to be a fruitful research direction. For example, our findings suggest there may be a more nuanced approach to consideration of reciprocity and mutuality of being willing to sacrifice (e.g., Bar-Kalifa et al., 2017; Gleason et al., 2003; Van Lange et al., 1997; Visserman et al., 2018).

Findings from Study 1, based on a hypothetical couple, suggests differences in perspectives between their own and other relationships. Participants rated the providing of support higher when one partner had provided support and the recipient had taken on the opportunity in the past, indicating that participants held the belief that support should be reciprocal. Novel qualitative findings from the current research supported this: exchange norms were endorsed by participants when one partner had taken an opportunity in the past but communal norms when one partner had in the past sacrificed (i.e., not taken an opportunity). There was no effect of reciprocity on future support when the vignette was based on their own relationship, however, as identified in Study 2. In fact, several participants said they believed that in relationships support should be unconditional, suggesting

a communal approach to relationships (Batson, 1993; Mills et al., 2004). These results are compelling as they suggest that while individuals may apply an expectation of reciprocity to others' relationships, they are more likely to be communal in their own relationship. Future studies investigating exchange and communal motives should consider the distinction between the reporting of participant beliefs about others or themselves.

It might prove fruitful to further examine methods that might help couples to mitigate goal non-harmony instances. Recent studies have shown, for example, that successful negotiation of goal non-harmony in couples predicts higher levels of support (Vowels & Carnelley, 2021) and better goal outcomes (Vowels et al., 2022). In everyday life, relationships are likely to experience goal non-harmony instances and will need to negotiate the division of resources for different goal pursuits, in addition to deciding who should sacrifice their goals to benefit the relationship. Indeed, the ability to navigate occurrences of goal non-harmony successfully may buffer the negative impact on support and goal outcomes of goal non-harmony.

Alongside the examination of goal non-harmony as a predictor of support processes, in Studies 1 and 3 we investigated whether individual differences in attachment styles moderated the association between support and goal outcomes and goal non-harmony. On the basis of established theory, we anticipated anxious individuals, but not avoidant, would be likely to withhold support (Feeney et al., 2013) and forego opportunities for goal pursuit (Feeney et al., 2013) when the goal pursuit represented a potential threat to the relationship. Contrary to our prediction, across the three studies, attachment anxiety did not significantly moderate any of the effects. Several potential reasons may explain why attachment anxiety was not a significant moderator in analyses. Firstly, a large amount of variance was predicted by goal non-harmony already and attachment styles may not have been able to explain further variance, in addition to goal non-harmony. Secondly, in Study 1 and 3 participants were relatively low in attachment anxiety and avoidance and goal non-harmony was relatively low in Study 3. Potentially, had we observed higher levels of attachment insecurity, this may have interacted with goal non-harmony. Thirdly, due to the low levels of attachment insecurity, a hypothetical scenario in Studies 1 and 2 may not have been enough to trigger a threat response in the participants. Fourthly, moderator effects require large sample sizes and are difficult to estimate (Gelman, 2018). It is possible, therefore, that the studies did not have enough power to estimate these effects. The current studies are among the first to examine this potentially key moderator with novel methods and fruitfully suggest directions for future research. Future research in a larger sample is therefore needed to further investigate whether attachment styles indeed interact with goal non-harmony.

Strengths and limitations

Across three studies, using multiple methodology including daily diary methods, qualitative data, and experimental vignettes, we showed converging evidence of the negative impact of goal non-harmony on goal support processes and goal outcomes. Data from couples were also included in Study 3, allowing us to examine potential partner effects, although lagged effects from multiple days across the diary period were not significant. This study had limitations in that same goals may not have been evaluated: goal non-harmony on one day may not be related to goal non-harmony the next day if the goals are different; yesterday's goal non-harmony may not be associated with how much one's goals non-harmony with their partner's or the relationship's today. Future research is therefore required to investigate specific goals over time to understand whether goal non-harmony with a specific goal is associated with outcomes over time. Our examination of goal non-harmony exclusively assessed the short-term and cannot speak about any potential long-term consequences of goal non-harmony on relationships. It is possible that extended goal non-harmony would have an increasingly negative impact on relationships and on individual well-being. Future research should examine these potential negative consequences of goal non-harmony and a potential resulting lack of support.

All studies were conducted in a relatively young Western sample (Studies 1 and 2 tested students and Study 3 tested newly committed couples). The generalizability of our samples is therefore potentially limited and may not apply to, for example, individuals from more collectivistic cultures where harmony is of particular importance. Finally, while vignettes have shown high reliability in previous studies, it was not possible to examine whether the attitudes translated to real behavior. Study 3 went some way towards addressing this limitation, but further studies on how naturally occurring goal non-harmony is related to a variety of outcomes are needed.

Conclusion

In conclusion, using multiple and novel methods the present research demonstrated that goal non-harmony can be detrimental to goal pursuit, with partners less likely to seek and provide support, perceive their partners as supportive, and feel less committed toward their goals. Were goal non-harmony to persist it could have negative consequences for relationships as it continually tests partners' commitment to each other. Due to the negative consequences on support processes and goal pursuit of goal non-harmony, it is important that couples can discuss instances where their goals are

not in harmony and learn to navigate these situations. In line with previous research (Vowels et al., 2022), successful negotiation of instances where the goals are non-harmonious can lead to better outcomes in the long-term.

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Declarations

The study received ethical approval from the authors' institutional review board and all participants consented to participate in the study.

Conflict of interest There are no conflicts of interest to disclose.

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References

- Arriaga, X. B., Kumashiro, M., Finkel, E. J., VanderDrift, L. E., & Luchies, L. B. (2014). Filling the void: Bolstering attachment security in committed relationships. *Social Psychological and Personality Science*, 5(4), 398–406. <https://doi.org/10.1177/1948550613509287>
- Bar-Kalifa, E., Pshedetzky-Shochat, R., Rafaeli, E., & Gleason, M. E. J. (2017). Daily support equity in romantic couples. *Social Psychological and Personality Science*, 9, 790–801. <https://doi.org/10.1177/1948550617725150>
- Bartholomew, K. (1990). Avoidance of intimacy: An attachment perspective. *Journal of Social and Personal Relationships*, 7(2), 147–178. <https://doi.org/10.1177/0265407590072001>
- Batson, D. C. (1993). Communal and exchange relationships: What is the difference? *Personality and Social Psychology Bulletin*, 19, 677–683.
- Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measurement of adult attachment: An integrative overview. In W. S. Rholes & J. A. Simpson (Eds.), *Attachment theory and close relationships* (pp. 46–76). Guilford Press.
- Cappuzzello, A. C., & Gere, J. (2018). Can you make my goals easier to achieve? Effects of partner instrumentality on goal pursuit and relationship satisfaction. *Personal Relationships*, 25(2), 268–279. <https://doi.org/10.1111/per.12238>
- Day, L. C., & Impett, E. A. (2018). Giving when it costs: How interdependent self-construal shapes willingness to sacrifice and satisfaction with sacrifice in romantic relationships. *Journal of Social and Personal Relationships*, 35(5), 722–742. <https://doi.org/10.1177/0265407517694965>

- Evans, S. C., Roberts, M. C., Keeley, J. W., Blossom, J. B., Amaro, C. M., Garcia, A. M., Stough, C. O., Canter, K. S., Robles, R., & Reed, G. M. (2015). Vignette methodologies for studying clinicians' decision-making: Validity, utility, and application in ICD-11 field studies. *International Journal of Clinical and Health Psychology, 15*(2), 160–170. <https://doi.org/10.1016/j.ijchp.2014.12.001>
- Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39*, 175–191. <https://doi.org/10.3758/BF03193146>
- Feeney, B. C. (2004). A secure base: Responsive support of goal strivings and exploration in adult intimate relationships. *Journal of Personality and Social Psychology, 87*(5), 631–648. <https://doi.org/10.1037/0022-3514.87.5.631>
- Feeney, B. C., & Collins, N. L. (2015). A new look at social support: A theoretical perspective on thriving through relationships. *Personality and Social Psychology Review, 19*(2), 113–147. <https://doi.org/10.1177/1088868314544222>
- Feeney, B. C., Collins, N. L., Van Vleet, M., & Tomlinson, J. M. (2013). Motivations for providing a secure base: Links with attachment orientation and secure base support behavior. *Attachment and Human Development, 15*(3), 261–280. <https://doi.org/10.1080/14616734.2013.782654>
- Feeney, B. C., & Thrush, R. L. (2010). Relationship influences on exploration in adulthood: The characteristics and function of a secure base. *Journal of Personality and Social Psychology, 98*(1), 57–76. <https://doi.org/10.1037/a0016961>
- Feeney, B. C., Van Vleet, M., Jakubiak, B. K., & Tomlinson, J. M. (2017). Predicting the pursuit and support of challenging life opportunities. *Personality and Social Psychology Bulletin, 43*(8), 1171–1187. <https://doi.org/10.1177/0146167217708575>
- Fitzsimons, G. M., & Finkel, E. J. (2018). Transactive-goal-dynamics theory: A discipline-wide perspective. *Current Directions in Psychological Science, 27*(5), 332–338. <https://doi.org/10.1177/0963721417754199>
- Fitzsimons, G. M., Sackett, E., & Finkel, E. J. (2016). Transactive Goal Dynamics Theory: A relational goals perspective on work teams and leadership. In B. Brief, AP and Staw (Ed.), *Research in organizational behavior: An annual series of analytical essays and critical reviews* (Vol. 36, pp. 135–155). <https://doi.org/10.1016/j.riob.2016.11.006>
- Fraley, R. C., Waller, N. G., & Brennan, K. A. (2000). An item response theory analysis of self-report measures of adult attachment. *Journal of Personality and Social Psychology, 78*(2), 350–365. <https://doi.org/10.1037/0022-3514.78.2.350>
- Ganong, L. H., & Coleman, M. (2006). Multiple segment factorial vignette designs. *Journal of Marriage and Family, 68*(2), 455–468. <https://doi.org/10.1111/j.1741-3737.2006.00264.x>
- Gelman, A. (2018). *You need 16 times the sample size to estimate an interaction than to estimate a main effect.* <https://statmodeling.stat.columbia.edu/2018/03/15/need-16-times-sample-size-estimate-interaction-estimate-main-effect/>. Accessed 16 Jan 2021.
- Gere, J., & Impett, E. A. (2018). Shifting priorities: Effects of partners' goal conflict on goal adjustment processes and relationship quality in developing romantic relationships. *Journal of Social and Personal Relationships, 35*(6), 793–810. <https://doi.org/10.1177/0265407517698851>
- Gere, J., & Schimmack, U. (2013). When romantic partners' goals conflict: Effects on relationship quality and subjective well-being. *Journal of Happiness Studies, 14*(1), 37–49. <https://doi.org/10.1007/s10902-011-9314-2>
- Gere, J., Schimmack, U., Pinkus, R. T., & Lockwood, P. (2011). The effects of romantic partners' goal congruence on affective well-being. *Journal of Research in Personality, 45*(6), 549–559. <https://doi.org/10.1016/j.jrp.2011.06.010>
- Gleason, M. E. J., Iida, M., Bolger, N., & Shrout, P. E. (2003). Daily supportive equity in close relationships. *Personality and Social Psychology Bulletin, 29*(8), 1036–1045. <https://doi.org/10.1177/0146167203253473>
- Hart, C. M., Ritchie, T. D., Hepper, E. G., & Gebauer, J. E. (2015). The Balanced Inventory of Desirable Responding Short Form (BIDR-16). *SAGE Open, 5*(4). <https://doi.org/10.1177/2158244015621113>
- Hsieh, H.-F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research, 15*, 1277–1288. <https://doi.org/10.1177/1049732305276687>
- Hui, C. M., Finkel, E. J., Fitzsimons, G. M., Kumashiro, M., & Hofmann, W. (2014). The Manhattan effect: When relationship commitment fails to promote support for partners' interests. *Journal of Personality and Social Psychology, 106*(4), 546–570. <https://doi.org/10.1037/a0035493>
- Impett, E. A., Le, B. M., Asyabi-Eshghi, B., Day, L. C., & Kogan, A. (2013). To give or not to give? Sacrificing for avoidance goals is not costly for the highly interdependent. *Social Psychological and Personality Science, 4*, 649–657. <https://doi.org/10.1177/1948550612474673>
- Kelley, H. H., & Thibaut, J. W. (1978). *Interpersonal relations: A theory of interdependence.* Wiley-Interscience.
- Kenny, D. A., Kashy, D. A., & Cook, W. L. (2006). *Dyadic data analysis.* Guilford Press.
- 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. <https://doi.org/10.1177/0956797610388815>
- Ledermann, T., & Kenny, D. A. (2017). Analyzing Dyadic Data With Multilevel Modeling Versus Structural Equation Modeling: A Tale of Two Methods. *Journal of Family Psychology, 31*(4), 442–452. <https://doi.org/10.1037/fam0000290>
- Mikulincer, M., & Shaver, P. R. (2003). The attachment behavioral system in adulthood: Activation, psychodynamics, and interpersonal processes. *Advances in Experimental Social Psychology, 35*, 53–152. [https://doi.org/10.1016/S0065-2601\(03\)01002-5](https://doi.org/10.1016/S0065-2601(03)01002-5)
- Mikulincer, M., & Shaver, P. R. (2007). Contributions of attachment theory and research on motivation science. In James. Y. Shah & W. L. Gardner (Eds.), *Handbook of motivation science.* (pp. 201–216). Guilford Press.
- Mikulincer, M., & Shaver, P. R. (2012). Adult attachment orientations and relationship processes. *Journal of Family Theory and Review, 4*(4), 259–274. <https://doi.org/10.1111/j.1756-2589.2012.00142.x>
- Mills, J., Clark, M. S., Ford, T. E., & Johnson, M. (2004). Measurement of communal strength. *Personal Relationships, 11*(2), 213–230. <https://doi.org/10.1111/j.1475-6811.2004.00079.x>
- Peabody, J. W., Luck, J., Glassman, P., Dresselhaus, T. R., & Lee, M. (2000). Comparison of Vignettes, Standardized Patients, and Chart Abstraction: A Prospective Validation Study of 3 Methods for Measuring Quality. *JAMA, 283*(13), 1715–1722. <https://doi.org/10.1001/jama.283.13.1715>
- Peters, G.-J. Y. (2017). userfriendlyscience: Quantitative analysis made accessible. *R Package Version 0.6-1.* 10.17605/OSF.IO/TXEQU
- Righetti, F., Gere, J., Hofmann, W., Visserman, M. L., & Van Lange, P. A. M. (2016). The burden of empathy: Partners' responses to divergence of interests in daily life. *Emotion, 16*(5), 684–690. <https://doi.org/10.1037/emo0000163>
- Righetti, F., Kumashiro, M., & Campbell, S. B. (2014). Goal difficulty and openness to interpersonal goal support. *Personality & Social Psychology Bulletin, 40*(9), 1107–1118. <https://doi.org/10.1177/0146167214535954>

- Righetti, F., Rusbult, C., & Finkenauer, C. (2010). Regulatory focus and the Michelangelo Phenomenon: How close partners promote one another's ideal selves. *Journal of Experimental Social Psychology, 46*(6), 972–985. <https://doi.org/10.1016/j.jesp.2010.06.001>
- Rusbult, C. E., & Van Lange, P. A. M. (2003). Interdependence, interaction, and relationships. *Annual Review of Psychology, 54*(1), 351–375. <https://doi.org/10.1146/annurev.psych.54.101601.145059>
- Sheringham, J., Kuhn, I., & Burt, J. (2021). The use of experimental vignette studies to identify drivers of variations in the delivery of health care: A scoping review. *BMC Medical Research Methodology, 21*(1), 81. <https://doi.org/10.1186/s12874-021-01247-4>
- Tomlinson, J. M., Feeney, B. C., & Van Vleet, M. (2016). A longitudinal investigation of relational catalyst support of goal strivings. *Journal of Positive Psychology, 11*(3), 246–257. <https://doi.org/10.1097/OGX.0000000000000256>
- Van Lange, P. A. M., 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*(6), 1373–1395. <https://doi.org/10.1037/0022-3514.72.6.1373>
- Visserman, M. L., Righetti, F., Impett, E. A., Keltner, D., & Van Lange, P. A. M. (2018). It's the motive that counts: Perceived sacrifice motives and gratitude in romantic relationships. *Emotion, 18*(5), 625–637. <https://doi.org/10.1037/emo0000344>
- Vowels, L. M., & Carnelley, K. B. (2021). Attachment styles, negotiation of goal conflict, and perceived partner support during COVID-19. *Personality and Individual Differences, 171*, 110505. <https://doi.org/10.1016/j.paid.2020.110505>
- Vowels, L. M., Carnelley, K. B., & Francois-Walcott, R. R. R. (2022). Successful negotiation of goal conflict between romantic partners predicts better goal outcomes during COVID-19: A mixed methods study. *Journal of Social and Personal Relationships, 39*(2), 155–178. <https://doi.org/10.1177/02654075211033341>

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