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Communal Motivation and Well-Being in Interpersonal Relationships: An Integrative Review and Meta-Analysis

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The motivation to care for the welfare of others, or *communal motivation*, is a crucial component of satisfying interpersonal relationships and personal well-being. The current meta-analysis synthesized 100 studies ($N_{\text{total}} = 26,645$) on communal motivation to establish its associations with subjective personal well-being (e.g., life satisfaction, positive affect, and negative affect) and relationship well-being (e.g., relationship satisfaction, partner-oriented positive affect, and partner-oriented negative affect) for both the person providing communal care and their partner. Three types of communal motivation were examined, including general, partner-specific (for children, parents, romantic partners, and friends), and unmitigated (i.e., devoid of agency and self-oriented concern). Results revealed positive associations between all three forms of communal motivation and relationship well-being for the self ($.11 \leq r_s \leq .44$) and relationship partners ($.11 \leq r_s \leq .15$). However, only general and partner-specific communal motivation, and not unmitigated communal motivation, were linked with greater personal well-being for both the self ($.12 \leq r_s \leq .16$) and relationship partners ($.04 \leq r_s \leq .09$). These associations were generally consistent across gender, relationship length, publication status, and lab. Finally, relationship partners were similar in partner-specific ($r = .26$) and unmitigated ($r = .15$) communal motivation only. Findings from the current meta-analysis suggest that care for the welfare of others is linked to greater relationship well-being for both members of a relationship. However, communal care is only linked to personal well-being insofar as it is mitigated by a degree of self-oriented concern. We provide theoretical and power recommendations for future research.

Public Significance Statement

This meta-analysis of 100 studies demonstrated that caring for the welfare of others is linked to relationship well-being for those who care as well as their close relationship partners. However, caring for the welfare of others is linked to personal well-being only insofar as people are not self-neglecting in their care.

Keywords: actor-partner interdependence model (APIM), communal motivation, interpersonal relationships, meta-analysis, well-being

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Communal motivation, defined as care and concern for the welfare of others (Clark & Mills, 2011), lies at the heart of building close and supportive interpersonal relationships. To promote positive outcomes in their relationships, people are often motivated to care for their partner's needs and desire partners who do the same. For instance, parents who are communally motivated report being highly responsive to their children's needs (Le & Impett, 2015). Friends and romantic partners rely on mutual communal motivation as a source of intimacy and support (Mills, Clark, Ford, & Johnson, 2004). And communal motivation can inspire provision of help to those who may need it most, such as for homeless individuals (Bryan, Hamer, & Fisher, 2000). Over the past four decades, three forms of communal motivation have been investigated: *general communal motivation* (Clark, Ouellette, Powell, & Milberg, 1987), *partner-specific communal motivation* for a particular child, parent, romantic partner, or friend (Mills et al., 2004), and *unmitigated communal motivation*, a form of care devoid of agency and self-oriented concern (Fritz & Helgeson, 1998; Helgeson & Fritz, 1998). A number of studies have examined links between these three forms of communal motivation with subjective personal and relationship well-being, and they are the focus of the current review and meta-analysis.

It is important to understand the link between communal motivation and well-being given that there may be both costs and benefits associated with caring for others (Crocker, Canevello, & Brown, 2017). Consider a father who is motivated to comfort his daughter after she is bullied at school, a husband who cooks dinner for his spouse after an exhausting day at work, or a supervisor who regularly solicits feedback from her employees on what they need to succeed. In each of these scenarios, the recipients of care likely experience greater personal well-being (e.g., greater life satisfaction, positive affect) from having their needs met, as well as enhanced relationship well-being (e.g., satisfaction, appreciation) from seeing their partner's dedication (Day, Muise, Joel, & Impett, 2015; Joel, Gordon, Impett, MacDonald, & Keltner, 2013; Mills et al., 2004; Wieselquist, Rusbult, Foster, & Agnew, 1999). The people who provide care are also likely to experience intrinsic joy and reinforce satisfying relationship bonds, perhaps by bolstering their own confidence that they are valued by their partners (Grote & Clark, 1998; Kogan et al., 2010; Le & Impett, 2015; Le, Impett, Kogan, Webster, & Cheng, 2013; Lemay & Muir, 2016). However, in each of these scenarios, it is also possible for the caring person to become so overly focused on others that they lose sight of their own well-being in the process (Fritz & Helgeson, 1998; Helgeson & Fritz, 1998). When communal motivation is not mitigated by a degree of self-concern, both the recipients and providers of care may experience a mix of positive and negative outcomes. While people may experience stress and strain from providing frequent and intense care (Fritz & Helgeson, 1998), they may nevertheless be able to maintain satisfying relationships with their partner by sacrificing potential personal benefits (Amanatullah, Morris, & Curhan, 2008). In addition, their relationship partners may either benefit from receiving high levels of care or, alternatively, feel smothered from receiving more care than they desire (Clark & Mills, 2011; Helgeson & Fritz, 1999; Piro, Zeldow, Knight, Mytko, & Gradishar, 2001).

In the current review and meta-analysis, we integrate research on general, partner-specific, and unmitigated communal motivation to understand how each form of communal motivation is

associated with subjective well-being, focusing on both personal and relationship well-being.¹ We assess personal well-being using the cognitive indicator of life satisfaction and emotional indicators of positive affect and negative affect (Diener, Oishi, & Lucas, 2012). We examine relationship well-being with similar indicators, including evaluations of relationship satisfaction, partner-oriented positive affect, and partner-oriented negative affect.

Communal Motivation and Well-Being in Interdependent Relationships

Relationships are inherently interdependent in nature—the outcomes that one partner experiences become deeply intertwined with another partner's outcomes over time and across contexts (Clark & Mills, 2011; Kelley & Thibaut, 1978; Rusbult & Van Lange, 2003). Given that partners rely on one another to meet emotional, physical, and practical needs, communal motivation to care for a partner is essential to ensuring the well-being of both individuals (Clark & Mills, 2011). When relationship partners are low in care and concern for one another, they are at risk for highly dissatisfying or even exploitative relationships (Clark, 2011). Indeed, having supportive relationships is so crucial to well-being that it is linked to lower rates of mortality (Holt-Lunstad, Smith, & Layton, 2010). Despite the importance of supportive relationships for well-being, it is unclear how different ways of caring for others' needs—which vary in the extent to which they focus on the needs of others and the needs of the self—may shape both relationship partners' well-being for better or for worse.

Given the challenge of balancing one's own needs and a relationship partner's needs, and the importance of this balance for maintaining well-being (Kumashiro, Rusbult, & Finkel, 2008), scholars from social exchange theory traditions—which examine how people negotiate the exchange of tangible and intangible benefits—have mapped several approaches to achieving maximally fulfilling outcomes for interdependent dyads and groups (Cook, Cheshire, Rice, & Nakagawa, 2013). One social exchange approach applied to close relationships in particular has contrasted communal and exchange norms. A communal approach to relationships focuses on providing benefits to partners based on need and has been shown to foster more satisfying relationships relative to an exchange approach focused on providing benefits in a tit-for-tat fashion (Clark & Mills, 2011).

Indeed, communal motivation to care for a relationship partners' needs should lead partners to perceive responsiveness to their needs, thereby increasing a partner's personal and relationship well-being and inspiring them to adopt a similar motivation in return. From an interdependence theoretical perspective, the existence of communal motivation may suggest that couple members

¹ We were primarily interested in how the motivation to care for others is linked to well-being. Thus, we excluded from our examination important, yet distinct, constructs. This included those that are interdependence and other-oriented in nature, but do not capture the specific motivation to care for others generally or particular relationship partners. In doing so, we excluded individual differences in the extent to which people's identities, or self-construals, overlap with relationship partners in dyads or groups (i.e., interdependent or relational-interdependent self-construal). We also excluded individual differences in general other-oriented concerns, such as those which assess cooperation, empathy, or psychological femininity (i.e., agreeableness, empathy, communion, respectively).

have exhibited a transformation of motivation, a moving away from considering their self-interest only to considering the welfare of the partner and relationship. This transformation of motivation is thought to allow for more mutually satisfying relationship outcomes over time and across contexts (Kelley & Thibaut, 1978; Rusbult & Van Lange, 2003). In other words, when people are more communal, versus exchange, oriented in their relationships, this suggests that they are no longer thinking solely about benefits for themselves, but are also motivated to benefit their partners and maintain the quality of the relationship, an orientation that should benefit both relationship partners.

The Personal and Relationship Benefits of Caring for Others

Indeed, consistent with an interdependence theoretical perspective, when people are motivated to care for others generally, both they and their partners experience greater well-being. *General communal motivation* (i.e., communal orientation; Clark et al., 1987) is the motivation to care for the welfare of others and desire that others will be similarly caring for one's own welfare. People who are generally communally motivated have been shown to have caring concern for others broadly, ranging from close relationship partners to strangers and acquaintances (Bryan et al., 2000; Clark et al., 1987). Importantly, when people are generally communally motivated, they experience more satisfying and secure relationships with family members, friends, and spouses (Borelli et al., 2013; Jones & Vaughan, 1990; Le et al., 2013; Mills et al., 2004; Park, Troisi, & Maner, 2011). General communal motivation is commonly measured with the scale shown in Table 1.

From an interdependence perspective, it is important to focus not only on the outcomes of a partner, but also on one's own outcomes to maximize relationship benefits (Kelley & Thibaut, 1978). Indeed, not only do those who are generally communally motivated experience more satisfying relationships with others, they are buffered against the stress and resentment that may come

from caring for others in high need, such as a patient at work or a sick family member (Medvene, Volk, & Meissen, 1997; Thompson, Medvene, & Freedman, 1995; Van Yperen, Buunk, & Schaufeli, 1992; Williamson & Schulz, 1990). This buffering may be due in part to their consideration of their own needs when caring for others (Clark, Mills, & Powell, 1986; Clark et al., 1987), which may enable them to sustain high levels of care for others over time.

Although caring for others generally may foster satisfaction across a range of relationships, it may be functional at times to target one's care for specific partners. Doing so has been shown to maximize the needs that are met in that particular relationship, promoting the well-being of both members to a higher degree than if one's care was not highly targeted (Lemay, Clark, & Feeney, 2007; Mills et al., 2004). For instance, children require high levels of care and romantic partners expect higher investments from one another relative to friends. Given these different relationship needs and expectations, people may have *partner-specific communal motivation* (i.e., communal strength; Mills et al., 2004) to care for specific people through investment of time, effort, or money. Consistent with the idea that caring for a partner's needs should increase a partner's satisfaction via perceived responsiveness, communal motivation for specific romantic partners and friends has been linked to higher relationship satisfaction and responsiveness for both the self and partners broadly (Lemay, Clark, & Feeney, 2007; Mills et al., 2004) and in the specific domain of sexuality (Day et al., 2015; Hughes & Snell, 1988; Muise & Impett, 2015, 2016). Partner-specific communal motivation is commonly measured with the scale shown in Table 2.²

In addition to experiencing greater relationship well-being, people high in partner-specific communal motivation enjoy caring for others, in part because they find it authenticates their sense of self, which in turn boosts their personal well-being (Kogan et al., 2010; Le & Impett, 2015). Indeed, parents and romantic partners experience greater personal and relationship well-being when caring for their relationship partners (Kogan et al., 2010; Le & Impett, 2015; Lemay et al., 2007). Thus, research has indicated that when people are communally motivated to meet the needs of specific partners, both they and their partners experience greater personal and relationship well-being.

The Risks of Unmitigated Care for Others

Although the benefits of communal motivation have been documented in relationships when people are generally caring as well as caring for specific partners, most psychological processes, including communal motivation, may be functional and beneficial at times, but costly at others (Mills & Clark, 1986; Kelley & Thibaut, 1978; McNulty & Fincham, 2012). For example, communal motivation may create an opportunity for exploitation by others (Clark, 2011). It could also create situations in which people neglect their own needs with an uncaring partner who does not reciprocate

Table 1
Measurement of General Communal Motivation

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1. It bothers me when other people neglect my needs.
 2. When making a decision, I take other people's needs and feelings into account.
 3. I'm not especially sensitive to other people's feelings.^a
 4. I don't consider myself to be a particularly helpful person.^a
 5. I believe people should go out of their way to be helpful.
 6. I don't especially enjoy giving others aid.^a
 7. I expect people I know to be responsive to my needs and feelings.
 8. I often go out of my way to help another person.
 9. I believe it's best not to get involved taking care of other people's personal needs.^a
 10. I'm not the sort of person who often comes to the aid of others.^a
 11. When I have a need, I turn to others I know for help.
 12. When people get emotionally upset, I tend to avoid them.^a
 13. People should keep their troubles to themselves.^a
 14. When I have a need that others ignore, I'm hurt.
-

Note. Items are from the Clark, Ouellette, Powell, and Milberg (1987) "communal orientation" scale rated from 1 = *extremely uncharacteristic of them* to 5 = *extremely characteristic of them*.

^a Reverse-scored.

² See the appendices for two additional partner-specific communal motivation scales. Appendix A includes a partner-specific communal motivation scale from Lemay and Neal (2013) that was adapted from the original measure (Mills et al., 2004) to increase reliability. Appendix B includes the partner-specific sexual communal motivation scale from Muise, Impett, and Desmarais (2013).

Table 2
Measurement of Partner-Specific Communal Motivation

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1. How far would you be willing to go to visit _____?
 2. How happy do you feel when doing something that helps _____?
 3. How large a benefit would you be likely to give _____?
 4. How large a cost would you incur to meet a need of _____?
 5. How readily can you put the needs of _____ out of your thoughts?^a
 6. How high a priority for you is meeting the needs of _____?
 7. How reluctant would you be to sacrifice for _____?^a
 8. How much would you be willing to give up to benefit _____?
 9. How far would you go out of your way to do something for _____?
 10. How easily could you accept not helping _____?^a
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Note. Items are from the Mills, Clark, Ford, and Johnson (2004) “communal strength” scale rated from 0 = *not at all* to 10 = *extremely*. The scale is adaptable to different relationship partners, who would be listed in the blanks above. Instructions prompt participants to keep in mind the partner of interest when answering the questions.

^a Reverse-scored.

their care (Helgeson & Fritz, 1999; Mills & Clark, 1986). In other words, there may be cases when providing care to others maximizes a partner’s outcomes but not one’s own.

Indeed, theoretical models derived from an interdependence perspective have examined how different ways of providing benefits to a relationship partner may help or hurt a person’s own outcomes (Kelley & Thibaut, 1978). This work has revealed that when people are focused on maximizing outcomes for both themselves and their partners—or focus on maximizing joint outcomes—they both experience benefits while also minimizing the relative and actual differences in their outcomes. These models are consistent with research documenting the mutual well-being benefits experienced by those high in general and partner-specific communal motivation, who often consider their own needs when caring for others (Clark, 2011; Clark, Dubash, & Mills, 1998; Clark & Mills, 2011; Clark et al., 1986, 1987).

In contrast, an interdependence analysis has shown that a pure focus on maximizing a relationship partner’s outcomes, without consideration of one’s own outcomes, may benefit a relationship partner but is never more functionally valuable than a focus on maximizing joint outcomes (Kelley & Thibaut, 1978). This pattern of providing benefits is consistent with a form of care that is devoid of agency and acknowledgment of personal needs, or *unmitigated communal motivation*³ (i.e., unmitigated communion; Bruch, 2002; Fritz & Helgeson, 1998; Helgeson & Fritz, 1998; see Table 3 for a commonly used scale). Consistent with their over focus on others, people who are high in unmitigated communal motivation accept, receive, and request lower levels of support, which may ultimately compromise their well-being (Fritz & Helgeson, 1998; Helgeson & Fritz, 1999; Helgeson, Swanson, Ra, Randall, & Zhao, 2015; Helgeson, 1994; Helgeson & Fritz, 2000). Indeed, high unmitigated communal motivation in general and clinical samples has been linked to greater distress, depression, and anxiety; less optimism; and more disappointment in life (Danoff-Burg, Revenson, Trudeau, & Paget, 2004; Fritz, 2000; Fritz & Helgeson, 1998; Helgeson & Palladino, 2012; Helgeson, 2003; Helgeson & Fritz, 1999; Piro et al., 2001; Trudeau, Danoff-Burg, Revenson, & Paget, 2003). A couple of studies have found that unmitigated communal motivation is unassociated with some positive indicators of well-being, including happiness, confidence, and self-esteem (Fritz, 2000; Helgeson et al., 2015), suggesting that the

link between unmitigated communal motivation and lower well-being may be driven more by negative states, rather than an absence of positive ones.

Whereas unmitigated communal motivation is generally linked to lower personal well-being, especially when assessed as negative states, caring for others without self-oriented concern has been linked with both increased and decreased relationship well-being. Consistent with an interdependence perspective on the costs of an over focus on maximizing partner outcomes, when people high in unmitigated communal motivation engage in negotiation, they concede beneficial personal outcomes (Amanatullah et al., 2008). However, in doing so, they maintain a sense of relationship satisfaction with their negotiation partners. Indeed, people high in unmitigated communal motivation report high satisfaction with family members and nonclose others, such as their doctor (Piro et al., 2001). However, while some research has indicated that people high in unmitigated communal motivation experience satisfying relationships, other research has shown the contrary, with people high in unmitigated communal motivation reporting poorer quality relationships with family and friends (Helgeson & Fritz, 2000)—including feeling annoyed by and perceiving displeasure and disappointment from partners (Helgeson & Fritz, 1999). Partners of people high in unmitigated communal motivation also experience decreased well-being in the domain of sexuality (Muise, Bergeron, Impett, & Rosen, 2017). This research suggests that people unmitigated in their communal care may, at times, be overbearing or strain their relationships. The conflicting findings linking unmitigated communal motivation with relationship well-being could be attributable, at least in part, to the fact that some studies account (e.g., statistically control) for other- and self-orientations (i.e., communion and agency), whereas others do not. The current meta-analysis can help resolve these inconsistencies that may have arisen due to differential use of statistical controls across studies.

³ Unmitigated communal motivation is often conceptualized as a trait. However, we refer to it as a form of motivation given that trait-level dispositions can reflect chronic motivations.

Table 3
Measurement of Unmitigated Communal Motivation

1. I *always* place the needs of others above my own.
2. I never find myself getting overly involved in others' problems.^a
3. For me to be happy, I need others to be happy.
4. I worry about how other people get along without me when I am not there.
5. I have *no* trouble getting to sleep at night when other people are upset.^a
6. It is impossible for me to satisfy my own needs when they interfere with the needs of others.
7. I can't say no when someone asks me for help.
8. Even when exhausted, I will always help other people.
9. I often worry about others' problems.

Note. Items are from the Fritz and Helgeson (1998) "unmitigated communion" scale rated from 1 = *strongly disagree* to 5 = *strongly agree*. Instructions prompt participants to respond about "people close to you—friends or family."

^a Reverse-scored.

Dyadic Effects of Communal Motivation

One important aim of the current meta-analysis is to identify how different ways of being communally motivated are related to well-being for both communally motivated people *and* their relationship partners. This is an important contribution because it establishes the interpersonal, or dyadic, effect of a psychological process in one person on another person. Despite the central role of dyadic influences in close relationships, the majority of the research on communal motivation examines only one person, perhaps due to the time and cost demands of recruiting both relationship partners. Thus, while communal motivation is theorized to be highly important for the well-being of both relationship partners, a relative dearth of published data exists to support this claim, and the current meta-analysis leverages unpublished data to better understand the dyadic association between communal motivation and well-being for both relationship partners. In doing so, we examined the unique predictive effects of a person's own and their relationship partner's communal motivation on a person's own well-being, while also accounting for similarity between a person's own and their partner's communal motivation. Our analysis is guided by the Actor-Partner Interdependence Model (APIM; Kenny, Kashy, & Cook, 2006). In the current paper, we use the terms "actor" and "self" interchangeably. We also use the terms "partner" and "other" interchangeably.

Why Should Similarity in Communal Motivation Exist?

Communally motivated people may behave in caring ways that foster reciprocation of their motivation by their partners. This may be attributable to partners being more willing to invest in their relationships when their own needs are satisfied (Murray, Holmes, & Collins, 2006; Reis, Clark, & Holmes, 2004; Wieselquist et al., 1999). Hence those in existing relationships may increase in their communal motivation when they find that their partners are highly communal. Conversely, a person who consistently responds to the needs of a partner who rarely if ever reciprocates this responsiveness would likely find this relationship unsatisfying and potentially decrease their own communal motivation or leave the relationship

altogether given that they are at risk for being hurt or exploited (Clark, 2011; Kelley & Thibaut, 1978). Not only should partners be similar in their communal motivation via responsively meeting one another's needs, but they may also seek partners similar to themselves (Botwin, Buss, & Shackelford, 1997). Indeed, partner-specific communal motivation was found to be similar among marital partners in one study (Mills et al., 2004), although little published research otherwise has examined communal similarity among relationship partners. In the current meta-analysis, we leverage unpublished data to assess similarity in communal motivation between relationship partners more comprehensively.

Present Hypotheses

Drawing on communal relationships and interdependence theories, as well as our integrative review, we expected that general and partner-specific communal motivation would be associated with greater personal and relationship well-being for both the self and relationship partners. Given that people who are communally motivated generally and for specific partners tend to care for other's needs while accounting for their own needs (Clark, 2011; Clark, Dubash, & Mills, 1998; Clark & Mills, 2011), they should ultimately promote their partner's personal and relationship well-being, without compromising their own well-being. We also expected that people who are communally motivated generally and for specific partners would experience greater personal and relationship well-being themselves given that caring for others may prompt them to feel that they are acting authentically, or in line with their true sense of self (Kogan et al., 2010; Le & Impett, 2015). Indeed, from an interdependence theoretical perspective, striving to support the welfare of another while considering one's own interests should maximize outcomes, in this case well-being, for both partners (Kelley & Thibaut, 1978; Rusbult & Van Lange, 2003).

In contrast, and regarding one's own well-being, we hypothesized that unmitigated communal motivation would be linked to lower personal well-being for the self. From an interdependence theoretical perspective, focusing exclusively on a partner without accounting for one's own interests should result in poorer outcomes for the self (Kelley & Thibaut, 1978; Rusbult & Van Lange, 2003). Consistent with this perspective, unmitigated communal motivation has been linked to lower well-being for the self and less acceptance of help from others (Danoff-Burg et al., 2004; Fritz & Helgeson, 1998; Fritz, 2000; Helgeson, 2003; Helgeson & Palladino, 2012; Helgeson & Fritz, 1999; Piro et al., 2001; Trudeau et al., 2003). Thus, we expected that people who provide unmitigated care would experience lower personal well-being, given that they are unlikely to have their needs met or accept care from others. In regards to relationship well-being, we advanced competing hypotheses concerning whether unmitigated communal motivation should be linked to either higher or lower levels of relationship well-being. On the one hand, it is possible that those high in unmitigated communal motivation will experience lower relationship well-being due to the strain they experience from giving high levels of support to others while not accepting it themselves (Fritz & Helgeson, 1998; Helgeson & Fritz, 1999; Helgeson et al., 2015; Helgeson, 1994; Helgeson & Fritz, 2000). Alternatively, it is possible that those high in unmiti-

gated communal motivation experience greater relationship well-being given that their high levels of care may promote partner, and hence relationship, satisfaction, even if they sacrifice other potential benefits in doing so (Amanatullah et al., 2008; Piro et al., 2001).⁴

Regarding relationship partners of people high in unmitigated communal motivation, we also advanced competing hypotheses concerning whether these partners experience higher or lower personal and relationship well-being. On the one hand, research has indicated that partners of people high in unmitigated communal motivation may find the care they receive to be annoying or smothering (Clark & Mills, 2011; Helgeson & Fritz, 1999), thus leading to the prediction that these partners would experience lower personal and relationship well-being. Indeed, the limited research concerning dyadic effects of unmitigated communal motivation suggests that partners experience compromised well-being (Muise et al., 2017). However, it is also possible that relationship partners of people high in unmitigated communal motivation experience greater personal and relationship well-being because their partners are providing high levels of care for their needs. Indeed, people high in unmitigated communal motivation report providing high levels of support (Helgeson & Fritz, 1999), and from an interdependence theoretical perspective, a high focus on a partner should maximize a partner's outcomes (Kelley & Thibaut, 1978). Thus, we also tested the competing hypothesis that people high in unmitigated communal motivation promote their partner's personal and relationship well-being by virtue of maximizing their partner's outcomes through providing high levels of care.

Moderators of the Links Between Communal Motivation and Well-Being

We assessed two sets of moderators of the association between communal motivation and well-being. We first examined theoretical moderators, including type of communal motivation, gender, and relationship length. We also examined moderators assessing bias, including publication status and labs from which data were collected.

Contrasting Types of Communal Motivation

We tested whether general, partner-specific, and unmitigated communal motivation were differentially associated with well-being. To the extent that targeted communal motivation for a specific relationship partner should benefit particular relationships to a greater degree than being broadly oriented in one's care (Lemay et al., 2007; Mills et al., 2004), we expected that partner-specific, relative to general, communal motivation would be linked to higher levels of personal and relationship well-being. In addition, we expected that any well-being benefits conferred by people high in unmitigated communal motivation and their partners would be significantly lower than the well-being benefits experienced by those who are general and partner-specific in their communal motivation. This hypothesis is consistent with interdependence and communal theories indicating that caring in ways that account for one's own needs and outcomes should support mutually satisfying relationships to a greater degree than caring that is devoid of concern for personal needs (Clark, 2011; Clark & Mills, 2011; Kelley & Thibaut, 1978).

Gender

Communal motivation can be seen as counter stereotypical for men, who face many barriers to taking on communal roles relative to women (Croft, Schmader, & Block, 2015). Indeed, theory and research have indicated that all forms of communal motivation tend to be higher among women relative to men (Amanatullah et al., 2008; Coriell & Cohen, 1995; Fritz, 2000; Fritz & Helgeson, 1998; Helgeson & Palladino, 2012; Helgeson & Fritz, 1998, 1999; Helgeson et al., 2015; Helgeson, 1994; Jones, 1991; Le & Impett, 2015; Trudeau et al., 2003; Williamson & Schulz, 1990). Although women are generally more communal than men, evidence has been mixed as to whether this difference translates into greater well-being for women. Whereas a couple of studies have found that gender moderates the association between communal motivation and well-being (DeMaris, 2007; Hughes & Snell, 1988), other studies have found no such moderations (Day et al., 2015; Le & Impett, 2015; Mills et al., 2004; Muise & Impett, 2015; Saragovi, Koestner, Dio, & Aube, 1997). Given these inconsistent results, the current meta-analysis can help address the important question of the gender-specificity of these effects. Because our review identified more studies in the published literature with null, relative to significant, gender differences in the link between communal motivation and well-being, we expected that this link would not differ based on gender.

Relationship Length

Mutual communal care is likely integral to the well-being of both relationship partners throughout the duration of their relationship. While people value communal norms in their relationships, it has been theorized that people may strategically self-present high degrees of communal motivation in the initial stages of a relationship (Beck & Clark, 2010) and empirical results have indicated that people become less communal in their relationships over time (Clark et al., 2010; Mills & Clark, 2001). Although endorsement of communal norms may decrease over time, a degree of communal motivation is likely necessary to maintain healthy and satisfying relationships regardless of relationship stage (Beck & Clark, 2010; Mills & Clark, 2001). Because of this, we expected that the link between communal motivation and well-being would not differ among couples in shorter versus longer relationships.

Publication Status

Regarding moderations assessing bias, we examined whether effect sizes differed based on publication status, contrasting effects from published and unpublished studies. Doing so allowed us to determine whether associations between communal motivation and well-being may be the result of publication biases in which significant effects are overreported, thereby misrepresenting or overestimating effects in a population of truly representative studies (Rothstein, Sutton, & Borenstein, 2006).

⁴ We thank a reviewer for bringing to light this alternative hypothesis during the revision stage of this article.

Lab

Finally, we sought to test whether effect sizes differed based on the lab from which they were derived. We tested moderation by lab given that meta-analyses often include a disproportionate amount of data, and specifically unpublished data, from researchers conducting a given meta-analysis relative to other researchers investigating the same phenomenon but who are not involved with the meta-analysis (Ferguson & Brannick, 2012). Conducting such an analysis is important given that effect size differences may not be due to factors such as publication status alone, but also to the inclusion of unique samples, use of particular techniques, or other factors derived from specific investigators of the same phenomenon. Thus, we compared two groups of effect sizes: effects derived from studies principally investigated by the authors of the present meta-analysis versus all other effects.

Method

In this section, we detail our procedure for obtaining quantitative estimates for the current meta-analysis, with a flowchart depicting this process shown in Figure 1. Our full coding sheet including all effect sizes, variable and coding descriptions, and R analysis scripts can be accessed on the Open Science Framework (OSF) at <https://osf.io/6zv9/>.⁵

Literature Search and Data Requests

We first conducted searches for relevant articles using PsycINFO and Google Scholar. The key search terms of *communal orientation* (for general communal motivation), *communal strength* and *sexual communal strength* (for partner-specific communal motivation), and *unmitigated communion* (for unmitigated communal motivation) were used in conjunction with *satisfaction with life*, *emotion**, and *relationship satisfaction*, with an asterisk allowing for articles with derivations of a key word to be included in the search results (i.e., emotions, emotional, emotionality). Our searches included published journal articles, dissertations, theses, and review chapters.

In addition, we used the cross-reference technique (Rosenthal, 1991) to identify additional papers relevant for the current study. We did so by reviewing papers that cited articles in which each communal motivation construct and/or scale first appeared (i.e., forward search). In addition, we reviewed articles that were cited by (i.e., backward search) or cited (i.e., forward search) major review articles and chapters on the communal motivation constructs of interest.

Finally we took the following steps in requesting data: (a) we sent announcements requesting published and unpublished data to the Society for Personality and Social Psychology (SPSP), the International Association for Relationship Research (IARR), and the Social Personality and Health Network (SPHN) listservs; (b) we contacted experts in the area of communal motivation to request unpublished data; (c) we contacted authors directly when key variables of interest, but not relevant correlations, were reported in their published paper (while also requesting relevant unpublished data); and (d) we included all new and relevant articles identified via ongoing Google Scholar alerts while completing this work.

Inclusion and Exclusion Criteria

The basic inclusion criterion was that a study needed to include at least one measure of communal motivation and one indicator of well-being (i.e., one of the satisfaction or emotion measures). Because we were primarily interested in the naturalistic association between communal motivation and well-being, we excluded any articles that had an experimental manipulation of communal motivation (given the inconsistency in control/comparison groups) or in which communal motivation was measured after a manipulation ($k = 7$). Furthermore, we estimated unique effect sizes for each independent sample in each study. The first author, whose coding reached complete reliability with a second research assistant coder, completed coding of published articles. For unpublished data, the primary investigator of a particular dataset computed all effect sizes except in cases in which the primary investigator supplied the original data, allowing the first author to compute estimates of interest.

If a given study measured the association between communal motivation and well-being at multiple time points, we recorded estimates between communal motivation and well-being only at the first time point to avoid estimating changes in key associations that may occur over time. The only instances in which we recorded estimates between communal motivation and well-being at different time points was when this association was measured in a different context—for instance, if communal motivation was measured generally at baseline and then later in the specific context of sacrificing for a romantic partner, these two estimates were recorded as unique estimates. We did so to maximize the number of effect sizes involving communal motivation in specific interpersonal contexts, given that one of the goals of the present investigation was to examine the effect across contexts. In the collected data, the associations between communal motivation and well-being were assessed at the general level for the majority of effects (70.68% of studies). The remaining associations between communal motivation and well-being were assessed in the contexts of sex (13.57% of studies), sacrifice (4.61%), caregiving (3.33%), love (1.54%), suffering (1.54%), spending money (1.41%), and other categories which comprised less than one percent of the total effect sizes each (3.32%; e.g., listed in highest to lowest frequency: social support, post break-up, conflict, negotiation, spouse's military deployment, helping, money management, postcoronary event).

If a given study measured the association between communal motivation and well-being within multiple relationships, we recorded estimates between communal motivation and well-being for each unique relationship given that another goal of the current investigation was to understand the association between communal motivation and well-being across a range of interpersonal relationships. Associations were observed for people who were communally motivated toward others at a general level (15.88%) as well as for those who were communally motivated for, or reporting on relationships with, romantic partners (64.66%), friends (10.50%), children (2.69%), parents (2.30%) siblings (1.79%), and other people comprising less than one percent of the total effect sizes

⁵ In the current work, we did not seek ethics approval given that we worked with existing data sets.

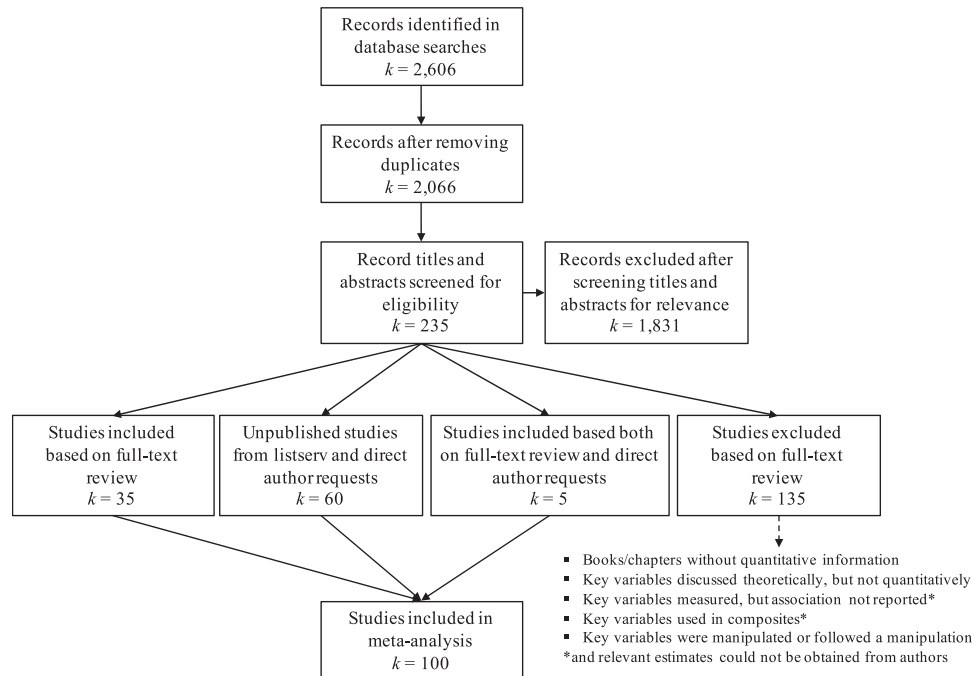


Figure 1. Flowchart detailing article search, article screening, data inclusions, and data exclusions.

each (2.18%; e.g., listed in highest to lowest frequency: coworkers, broader humanity, strangers, nonprimary family members, and acquaintances).

Coded Variables

Study and sample-level descriptors. We coded basic information for all studies included in the meta-analysis. Study-level descriptors included the study authors, publication status, journal, and publication year for published papers or year of data collection for unpublished raw data. Sample-level descriptors included the total number of participants in the sample, the number of men and women, the average age of participants, and the population and country from which the samples were collected.

Primary variables. All of the following variables were coded as measures of communal motivation: *communal orientation* (i.e., general communal motivation), *communal strength* (i.e., partner-specific communal motivation), *sexual communal strength* (i.e., partner-specific communal motivation), and *unmitigated communion*⁶ (i.e., unmitigated communal motivation). Personal well-being effects included those assessing *satisfaction with life*, *positive emotions*, and *negative emotions*. Positive and negative emotions were assessed as personal well-being when these emotions were reported generally, without reference to a specific partner or relationship. Relationship well-being effects included those assessing *relationship satisfaction*, *positive emotions within a relationship* (i.e., partner-oriented positive affect), and *negative emotions within a relationship* (i.e., partner-oriented negative affect). Positive and negative emotions were considered relational when they were experienced socially (i.e., gratitude or compassion) and reported with regards to a specific partner (i.e., love or resentment toward a partner). To retain the construct validity of the

communal motivation and the well-being measures of interest, we excluded studies that measured these key variables but combined them into composite measures with variables that did not assess communal motivation or well-being.

Given that we were interested in the bivariate, between-person correlations between measures of communal motivation and well-being, we used aggregates of any within-person effects, such as in daily diary designs, when possible (i.e., the authors provided these estimates or sent their data if the effects of interest were not reported in a published paper). Additionally, while at the outset of this work we had hoped to examine how the association between communal motivation and well-being varied based on context (e.g., sacrifice, caregiving), domain (e.g., sexuality), and relationship (e.g., romantic, friendship), we had a limited number of effects across different categories (as shown in the previously reported descriptives) thereby limiting our power to assess differences between these categories. Thus, we aggregated effect sizes across these domains and used these estimates and their associated average sample sizes in our meta-analytic assessments.⁷ Finally, for the few studies in which effects for men and women were reported separately, and we could not obtain the average sample effect size from the researchers of the given study, we computed

⁶ The meta-analysis included assessments of unmitigated communal motivation that were general (e.g., for people generally) as well as partner-specific (e.g., for a romantic partner). Because of the high similarity of the constructs in addition to power concerns (e.g., a small number of studies that included partner-specific assessments of unmitigated communal motivation), we combined general and partner-specific measures of unmitigated communal motivation.

⁷ We report sample sizes rounded down upon aggregation.

weighted averages of the correlations across men and women to determine the overall effect size for the sample.

Effect sizes. All effects of interest were coded in the r effect size metric or converted to an r effect size. Our primary estimates of interest were the associations between each form of communal motivation and composite measures of personal and relationship well-being. The first association of interest was the zero-order bivariate correlation between one's own communal motivation and one's own personal and relationship well-being, or the *intrapersonal association between communal motivation and well-being*. The second association of interest was the bivariate correlation between two relationship partners' communal motivation, or *similarity in actor and partner communal motivation*, which was assessed whenever dyadic data and estimates were available.

The third effect of interest was the partial correlation examining the extent to which an individual's communal motivation, controlling for their relationship partner's communal motivation, predicted an individual's personal and relationship well-being, or the *actor association between communal motivation and well-being*. The fourth and final effect of interest was derived from the same statistical model used to derive the actor effect, except in this case, we examined the partner's communal motivation, controlling for an individual's communal motivation, predicting an individual's personal and relationship well-being, or the *partner association between communal motivation and well-being*. We assessed these actor and partner effects whenever dyadic data were available, following the Actor-Partner Interdependence Model (APIM; Kenny, Kashy, & Cook, 2006) yielding partial correlations between actor and partner communal motivation predicting an actor's well-being to account for dependencies within dyadic relationships. Specifically, APIM analyses allowed us to assess the unique effects of communal motivation on each person's well-being by accounting for similarities in communal motivation between actors and partners. Doing so holds steady the degree to which a partner's communal motivation contributes to the link between an actor's own communal motivation and an actor's well-being (i.e., to account for an inflated actor effect). This effect is conceptually similar to that of the intrapersonal effect, except now accounting for a partner's communal motivation. In addition, this analysis holds steady the degree to which an actor's communal motivation contributes to the link between a partner's communal motivation and an actor's well-being (i.e., to account for inflated partner effects).

To assess well-being, we created composites for personal well-being (e.g., satisfaction with life, positive affect, negative affect) and relationship well-being (e.g., relationship satisfaction, partner-oriented positive affect, partner-oriented negative affect) within studies which assessed multiple indicators of well-being. To do so, we accounted for the bivariate correlations between well-being indicators to allow for a more precise estimation of the key meta-analytic effects of interest (Borenstein, Hedges, Higgins, & Rothstein, 2009). These correlations were obtained from published papers, provided by researchers upon request, or computed from raw data. Only five of the 100 studies were missing correlations between well-being indicators, for which we imputed correlations based on previous research or as estimated from effects in the current meta-analysis.⁸ For readers interested in results concerning the association between each form of communal motivation and the six discrete indicators of well-being, results can be seen in

Tables S1 to S4 available at the OSF link provided at the start of the Method section.

Moderator variables. All moderators were coded between study, with the exception of communal motivation type and gender. *Communal motivation type* was coded after collecting all estimates by assigning unique codes for estimates with general, partner-specific, and unmitigated communal motivation. For *gender*, we collected associations between communal motivation and well-being separately for men and women within study for as many samples as possible, then assigned contrast codes to estimates based on gender. We recorded *relationship length* as how long relationship partners have known each other (in the case of friends), been in a committed relationship (in the case of romantic partners), and as a child's age (in the case of parent-child relationships). With regard to *publication status*, we estimated effects separately for published and unpublished effects. Effects were coded as published if they appeared in journals or were made available in published form online (i.e., dissertations). Unpublished effects came in the form of estimates or raw data provided by researchers. Finally, effects were coded based on *lab*, with one group comprised of effects derived from data sets and papers principally investigated by the researchers conducting the current meta-analysis and the other group comprised of effects from all other researchers.

Descriptive Information

Descriptive statistics that follow represent study-level averages (i.e., information collapsed within unique samples when more than one effect was collected). The final dataset included 100 independent samples comprising 26,645 total participants (11,525 men and 14,860 women) with an average age of 28.96 years old ($SD = 11.90$ years). The average relationship length based on studies that reported this information was 6.40 years ($SD = 6.20$ years). Of the 100 samples included, 35 included published estimates, 60 included unpublished estimates, and 5 included both published and unpublished estimates. Additionally, 49 samples were collected from the current authors and 51 samples were collected from other labs. Studies ranged in publication year from 1990 to 2017. All studies included in the meta-analysis are marked with asterisks in the references section.

⁸ We imputed the correlation for life and relationship satisfaction based on previous research ($r = .42$; Heller, Watson, & Hies, 2004; a correlation which converged with results of the current study which yielded correlations of $r = .39$ for the full sample, for men, and for women, $ks = 17$ to 18). We also imputed the following correlations based on meta-analytic associations we estimated in our coded data: the correlations between satisfaction with life with personal positive affect ($r_{full\ sample} = .50$; $r_{men} = .49$; $r_{women} = .53$; $k = 17$ for all estimates) and personal negative emotions ($r_{full\ sample} = -.34$, $k = 17$; $r_{men} = -.36$, $k = 16$; $r_{women} = -.34$; $k = 17$); relationship satisfaction with personal positive affect ($r_{full\ sample} = .34$; $r_{men} = .33$; $r_{women} = .31$; $k = 21$ for all estimates) and personal negative affect ($r_{full\ sample} = -.27$, $k = 27$; $r_{men} = -.28$, $k = 26$; $r_{women} = -.27$, $k = 27$); and finally personal positive affect and personal negative affect ($r_{full\ sample} = -.28$, $k = 31$; $r_{men} = -.28$, $k = 28$; $r_{women} = -.30$, $k = 30$).

Results

Analytical Strategy

Analyses were conducted using the open-source statistical software R v.3.4.0 (R Core Team, 2017) using the metafor package (Viechtbauer, 2010). We tested models for the intrapersonal (r), actor (partial r), and partner (partial r) associations of communal motivation with personal and relationship well-being. We tested random effects models using restricted maximum likelihood estimation to allow for generalizability beyond the particular studies collected in the current meta-analysis (Borenstein, Hedges, Higgins, & Rothstein, 2010) and given that these models are more appropriate when analyses include partial correlations (Aloe & Becker, 2012).

Along with the average meta-analytic effect sizes reported in the r metric, we report two measures of heterogeneity which assess how consistent results are across studies. We report the tau-squared values of heterogeneity among the effect sizes alongside their Q-tests which, when significant, indicate heterogeneity (i.e., nonuniformity) among the effect sizes. Additionally, given that tau-squared values can be inaccurate for particularly small or large samples of studies, we also report the I^2 percent heterogeneity given that it has greater consistency across numbers of samples assessed and can be compared across meta-analyses (Higgins, Thompson, Deeks, & Altman, 2003). I^2 values range between 0% and 100%, with values of 25%, 50%, and 75%, corresponding to low, moderate, and high levels of heterogeneity (Higgins et al., 2003).

We also report tests of *funnel plot asymmetry* for all estimates derived from $k \geq 10$ studies (Sterne et al., 2011). Specifically, effects, with a sufficient number of samples, can be plotted based on effect size and sample size (or standard error), with unbiased estimates representing a funnel (i.e., the high power studies will converge on an accurate effect size at the tip of the funnel and low powered studies will show high variability—or imprecision—of estimates toward the bottom of the funnel); if a funnel plot is deemed asymmetric, as assessed with a regression test, this would indicate that the observed effect sizes in the meta-analysis are unevenly distributed around the average estimated effect size (accounting for sample size or standard error) as would be expected from the funnel distribution (Egger, Davey Smith, Schneider, & Minder, 1997; Sterne & Egger, 2006). If

bias was detected in a meta-analytic effect size estimate, we conducted a *trim and fill* analysis to estimate an adjusted average effect size and variance derived from a corrected funnel plot in which, through a number of iterations, the asymmetric portion is removed and missing effect sizes are imputed to yield a symmetric funnel plot (Duval, 2006).

Intrapersonal Effects of Communal Motivation and Well-Being

All intrapersonal associations, or associations capturing a person's internal experience as assessed by the link between their own self-reported communal motivation with personal and relationship well-being, are shown in Table 4. Given that other variables are not controlled, these effects are analogous to zero-order correlations. These results include all studies in which intrapersonal effects can be derived, including studies that were dyadic in nature and those that were not. For readers interested in the intrapersonal associations between the three forms of communal motivation and each of the six unique indicators of well-being (e.g., satisfaction with life, positive affect, negative affect, relationship satisfaction, partner-oriented positive affect, and partner-oriented negative affect), results can be seen on our OSF page in Table S1.

We expected general and partner-specific communal motivation to be associated with greater personal and relationship well-being. Indeed, both general and partner-specific communal motivation were linked to greater personal and relationship well-being. In testing the association between unmitigated communal motivation and personal well-being, we expected that higher unmitigated communal motivation would be associated with lower personal well-being. However, in testing the link between unmitigated communal motivation and relationship well-being, we tested whether unmitigated communal motivation would be associated with higher or lower relationship well-being. Results indicated that unmitigated communal motivation was associated with lower personal well-being, but greater relationship well-being.

Tests of heterogeneity indicated that all intrapersonal effects had significant and moderate to high levels of heterogeneity, with the exception of the association between unmitigated communal motivation and personal well-being. This variability suggests the

Table 4
Intrapersonal Associations between Communal Motivation and Well-Being

Measure	Estimates							Funnel plot asymmetry		
	k	N	r (SE)	95% CI		τ^2 (SE)	Q	I^2	Z	Adjusted estimate
				LL	UL					
General communal motivation										
Personal well-being	16	6,181	.12*** (.02)	.08	.16	.003 (.002)	25.81*	48.45	-.51	—
Relationship well-being	24	9,735	.20*** (.03)	.13	.26	.02 (.01)	188.56***	88.43	-.76	—
Partner-specific communal motivation										
Personal well-being	28	6,248	.16*** (.02)	.13	.20	.004 (.002)	52.24**	47.47	-1.44	—
Relationship well-being	55	13,764	.44*** (.02)	.39	.49	.03 (.01)	1,310.08***	93.99	-6.20***	.49*** [.44, .54]
Unmitigated communal motivation										
Personal well-being	26	4,901	-.06*** (.06)	-.09	-.03	.001 (.002)	28.27	17.71	.05	—
Relationship well-being	17	3,402	.12*** (.04)	.04	.19	.02 (.01)	85.32***	80.02	-1.60	—

Note. Effect sizes (r) are zero-order bivariate correlations.
* $p < .05$. ** $p < .01$. *** $p < .001$.

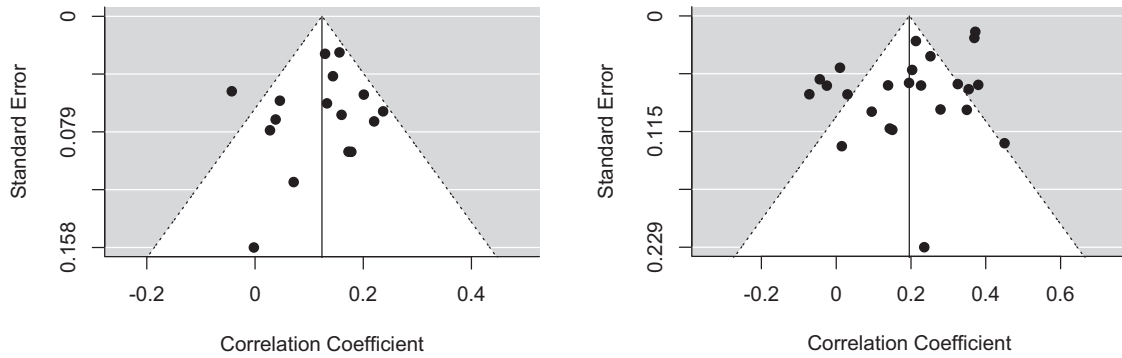


Figure 2. Funnel plots for the intrapersonal associations between general communal motivation with personal well-being (left) and relationship well-being (right).

potential presence of moderators. Funnel plots for general communal motivation (see Figure 2), partner-specific communal motivation (see Figure 3), and unmitigated communal motivation (see Figure 4) were symmetric with the exception of one plot. Specifically, as seen in Figure 3 and Table 4, the funnel plot for the association between partner-specific communal motivation and relationship well-being was asymmetric. However, a trim and fill analysis for this effect resulted in an effect that was largely unchanged from the original estimate.

Actor-Partner Similarity Effects

We tested an important tenet of communal motivation theory that relationship partners should be similar in their communal motivation to meet each other's needs (Clark & Mills, 2011). As seen in Table 5, we found that although partners' levels of general communal motivation were not significantly correlated, relationship partners tended to be similar in both partner-specific and unmitigated communal motivation, as indicated by positive correlations between actors and partners on these measures. There were significant, moderate to high, levels of heterogeneity in these associations, suggesting the presence of moderators. The funnel plot for partner-specific communal motivation (seen in Figure 5) was significantly asymmetric. However, a trim and fill adjusted estimate was largely unchanged from the original estimate.

Actor and Partner Effects of Communal Motivation and Well-Being

An important contribution of the current meta-analysis is that it allowed us to identify how one person's communal motivation is related to a relationship partner's well-being. Communal motivation theory has posited that the motivation to care for the needs of others is important for the well-being and satisfaction of a relationship partner (Clark & Mills, 2011). However, to the extent that one individual is unmitigated in their communal motivation, this may predict relationship strain among close relationship partners (Clark & Mills, 2011; Helgeson & Fritz, 1999). To this end, we tested the hypotheses that general and partner-specific communal motivation predict greater personal and relationship well-being for the self and relationship partners. We also tested whether unmitigated communal motivation predicts lower personal well-being for the self. Finally, in testing the link between unmitigated communal motivation and well-being for relationship partners, we believed it was possible that unmitigated communal motivation could be associated with higher or lower personal and relationship well-being. All actor and partner communal motivation and well-being effects are shown in Table 6. In Table 6, actor effects are conceptually similar to the intrapersonal effects previously reported, except now accounting for a partner's communal motivation. Partner effects are associations between a partner's communal moti-

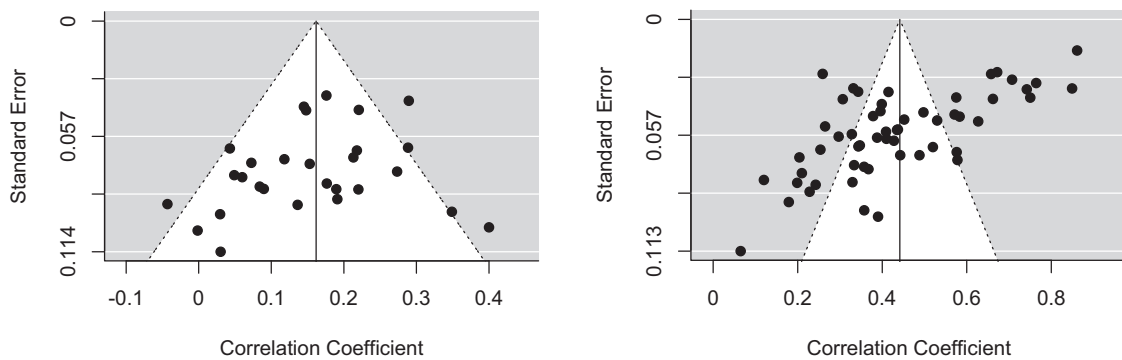


Figure 3. Funnel plots for the intrapersonal associations between partner-specific communal motivation with personal well-being (left) and relationship well-being (right).

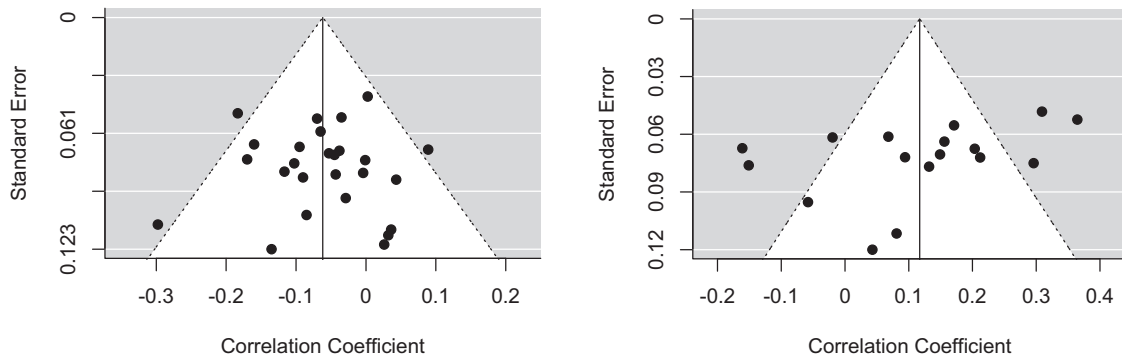


Figure 4. Funnel plots for the intrapersonal associations between unmitigated communal motivation with personal well-being (left) and relationship well-being (right).

vation and an actor's well-being (after the actor effect was partialled out in the original coded estimates). We report associations between communal motivation and personal and relationship well-being. However, readers interested in the actor and partner associations between each form of communal motivation and each of the six unique indicators of well-being can consult Tables S2 to S4 posted on OSF.

With regard to general and partner-specific communal motivation, we found that both forms of communal motivation were linked with greater personal and relationship well-being for both actors and partners. In contrast, we found that unmitigated communal motivation was linked to no differences in personal well-being for both actors and partners. Finally unmitigated communal motivation was linked with greater relationship well-being for both actors and partners.

Tests of heterogeneity indicated that all but one of the actor and partner associations between general communal motivation and well-being had significant, moderate to high, levels of heterogeneity. Partner-specific and unmitigated communal motivation associations with relationship well-being, but not personal well-being, had significant, moderate to high, levels of heterogeneity for both actor and partner effects. Additionally, funnel plots of the actor and partner associations between partner-specific communal motivation and personal well-being, as seen in Figure 6, were symmetric. Funnel plots of the actor and partner associations between partner-specific communal motivation and relationship well-being, as seen in Figure 7, were significantly asymmetric, with the adjusted estimates from trim and fill analyses remaining largely unchanged from the original estimate.⁹

Moderation Tests

Given that dyadic data is often resource-intensive and time-consuming to collect, there were fewer studies reporting actor and partner effects (ranging from 6 to 27 studies, as seen in Table 6), relative to intrapersonal effects (ranging from 16 to 55 studies, as seen in Table 4). This limited our ability to test moderators of actor and partner effects. To this end, we tested all between-study moderations on intrapersonal effects only (e.g., relationship length, publication status, lab status). However, for the two moderating variables for which we assessed within study, including communal motivation type and gender, we tested moderations for all intrapersonal, actor, and partner effects, given that there were increased observations for these tests.

ersonal, actor, and partner effects, given that there were increased observations for these tests.

We implemented the following coding scheme for the theoretical moderators assessed. To contrast different forms of communal motivation, we tested whether partner-specific communal motivation (coded as 1) was associated with well-being to a significantly greater degree than general communal motivation (coded as -1) given that targeted, rather than general, communal care may maximize well-being in interdependent relationships. We also tested whether associations between general communal motivation and well-being (coded as 1) were larger and more positive than the associations between unmitigated communal motivation and well-being (coded as -1). We repeated this model to contrast partner-specific communal motivation (coded as 1) and unmitigated communal motivation (coded as -1) in a different model.¹⁰

For gender, we tested moderations assessing differences between men (coded as 1) and women (coded as -1) for the associations between each form of communal motivation and well-being. The final theoretical moderator we assessed was whether relationship length modified any of the associations between each form of communal motivation and well-being in

⁹ The partner-specific communal motivation results change negligibly when removing sexual communal motivation from analyses (i.e., excluding it as a form of partner-specific communal motivation). This is in part attributable to sexual communal motivation also predicting greater well-being for the self and relationship partners. With regard to the unique effects of sexual communal motivation, it was linked with greater personal ($r = .22$, $SE = .08$, $p = .01$, $k = 2$, $N = 290$) and relationship well-being ($r = .36$, $SE = .04$, $p < .0001$, $k = 15$, $N = 4,154$) intrapersonally. Sexual communal motivation was also linked to both actor personal ($r = .22$, $SE = .10$, $p = .02$, $k = 2$; $N = 290$) and relationship well-being ($r = .32$, $SE = .08$, $p < .0001$, $k = 5$, $N = 1,104$) as well as partner relationship well-being ($r = .22$, $SE = .08$, $p = .01$, $k = 5$, $N = 1,104$), but not partner personal well-being ($r = .08$, $SE = .06$, $p = .19$, $k = 2$, $N = 290$). Finally, romantic partners' sexual communal motivation were not significantly correlated ($r = .13$, $SE = .08$, $p = .12$, $k = 5$, $N = 1,104$).

¹⁰ To meet assumptions of independence, we used a slightly smaller sample to test moderation by communal motivation type (i.e., we retained samples with only one communal measure and for samples with multiple communal measures, we retained the most underrepresented communal measure in the meta-analysis or chose one at random). However, we note that results change negligibly when we conduct moderation tests of communal motivation type on the full sample of estimates.

Table 5
Similarity in Actor-Partner Communal Motivation

Measure			Estimates						Funnel plot asymmetry	
			95% CI			Q	I^2	Z	Adjusted estimate	
			k	N	r (SE)					LL
General communal motivation	9	4,823	.06 (.04)	-.03	.15	.01 (.01)	95.87***	83.12	—	—
Partner-specific communal motivation	26	5,096	.26*** (.03)	.20	.33	.02 (.01)	164.29***	84.02	-3.04**	.31*** [.25, .38]
Unmitigated communal motivation	7	1,109	.15** (.05)	.06	.25	.01 (.01)	18.49**	65.69	—	—

Note. Effect sizes (r) are zero-order bivariate correlations.

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

shorter (-1 $SD = 0.20$ years) versus longer relationships ($+1$ $SD = 12.60$ years). Finally, we tested bias-related moderators. We examined whether publication status ($-1 = unpublished$, $1 = published$) and the lab that collected the data ($-1 = other authors$, $1 = authors$ of this meta-analysis) moderated the association between each form of communal motivation and well-being. In conducting moderation tests by publication status, we excluded five studies which had a mix of published and unpublished effects.

Contrasting different types of communal motivation. All results concerning contrasts of communal motivation type are shown in Table 7. Given that targeted care should benefit people and their partners to a greater degree than broadly caring for others, we tested whether partner-specific communal motivation was linked to greater well-being relative to general communal motivation. In testing these contrasts, we found that partner-specific communal motivation was linked to personal well-being to similar degrees as general communal motivation for both the self and partners. However, partner-specific communal motivation was linked to greater relationship well-being for the self (both for intrapersonal and actor effects), but not partners, relative to general communal motivation.

Next, given that self-neglecting forms of communal motivation should be more costly than communal motivation devoid of self-neglect, we tested whether general and partner-specific communal motivation were linked to greater well-being relative to unmitigated communal motivation. Results indicated that both general and partner-specific communal motivation were linked to greater

personal well-being for the self (both for intrapersonal and actor effects), but not partners, relative to unmitigated communal motivation. Finally, general and partner-specific communal motivation were linked to similar degrees of relationship well-being for the self and relationship partners relative to unmitigated communal motivation, with one exception: partner-specific communal motivation predicted greater personal well-being for the self (both for intrapersonal and actor effects) relative to unmitigated communal motivation.

Gender. The literature is currently unclear regarding the existence and size of gender differences in the link between communal motivation and well-being. As such, an important goal of this meta-analysis was to determine whether the associations between communal motivation and well-being differed for men and women. We tested this goal for intrapersonal, actor, and partner effects. The results, as shown in Table 8, indicated that although some of the gender-specific associations between communal motivation and well-being appeared to differ between men and women—with a few of these effects dropping to marginal or nonsignificance for one of the genders—moderator tests indicated that the gender-specific estimates were not significantly different for all forms of communal motivation.

Relationship length. As seen in Table 9, results indicated that relationship length largely did not moderate the associations between communal motivation and well-being. Relationship length only moderated one effect: the intrapersonal association between unmitigated communal motivation and relationship well-being. Simple effects indicated that people high in unmitigated communal motivation experience greater relationship well-being both in relatively short and long relationships, however, this association was stronger in longer (vs. shorter) relationships.

Publication status. In addition to assessing theoretical moderators, we also conducted tests of moderations to examine whether there is publication bias in the literature examining communal motivation and well-being. This is important given that the funnel plot asymmetry tests did not formally contrast effect sizes based on publication status in examining the distribution of effects. As seen in Table 10, tests of publication status moderating the intrapersonal effects yielded no significant results, indicating that the observed intrapersonal associations do not reflect patterns of publication bias.

Lab. Effects of interest may differ in size across labs due to variation in the use of methods, measures, and participants. In addition, labs involved in conducting a meta-analysis are likelier to contribute unpublished data to the project, which may affect meta-

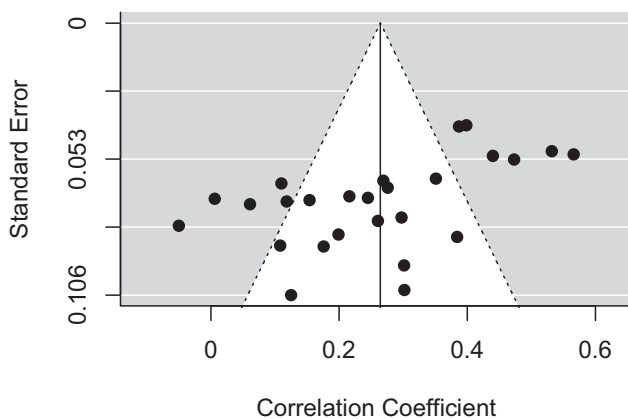


Figure 5. Funnel plot for actor-partner similarity in partner-specific communal motivation.

Table 6
Actor and Partner (APIM) Associations Between Communal Motivation and Well-Being

Measure	Estimates							Funnel plot asymmetry		
	<i>k</i>	<i>N</i>	<i>r</i> (<i>SE</i>)	95% CI		τ^2 (<i>SE</i>)	<i>Q</i>	<i>I</i> ²	<i>Z</i>	Adjusted estimate
				LL	UL					
General communal motivation										
Actor personal well-being	6	1,373	.16** (.05)	.06	.26	.01 (.01)	21.49***	73.61	—	—
Partner personal well-being	6	1,373	.09** (.03)	.03	.14	.000 (.003)	3.06	.00	—	—
Actor relationship well-being	9	4,823	.18*** (.05)	.09	.27	.02 (.01)	43.66***	86.83	—	—
Partner relationship well-being	9	4,823	.11** (.04)	.03	.18	.01 (.01)	58.81***	77.68	—	—
Partner-specific communal motivation										
Actor personal well-being	16	3,020	.15*** (.02)	.11	.18	.0003 (.002)	17.48	5.84	.63	—
Partner personal well-being	16	3,020	.04* (.02)	.01	.08	.0002 (.002)	15.10	4.44	-.66	—
Actor relationship well-being	27	5,252	.42*** (.03)	.36	.47	.02 (.01)	186.47***	85.26	-4.94***	.47*** [.41, .53]
Partner relationship well-being	27	5,252	.15*** (.03)	.09	.20	.01 (.01)	149.41***	74.20	-3.03**	.21*** [.16, .26]
Unmitigated communal motivation										
Actor personal well-being	7	1,109	-.03 (.03)	-.09	.03	.0000 (.005)	4.40	.00	—	—
Partner personal well-being	7	1,109	-.01 (.03)	-.08	.06	.002 (.01)	7.20	24.52	—	—
Actor relationship well-being	8	1,343	.11† (.06)	-.01	.22	.02 (.01)	34.52***	78.30	—	—
Partner relationship well-being	8	1,343	.13** (.04)	.04	.21	.01 (.01)	18.08*	59.46	—	—

Note. Effect sizes (*r*) are partial correlations of the unique associations of actor and partner communal motivation predicting well-being following the Actor-Partner Interdependence Model.

† *p* < .10. * *p* < .05. ** *p* < .01. *** *p* < .001.

analytic effect size estimates (Ferguson & Brannick, 2012). Given this, we contrasted effects derived from data sets of the current authors versus all other effects. As seen in Table 11, results indicated that lab status largely did not moderate the associations between communal motivation and well-being. Lab status only moderated one effect: the intrapersonal association between unmitigated communal motivation and relationship well-being. Simple effects indicated that while there was a small to moderate positive association between unmitigated communal motivation and relationship well-being found among studies principally investigated by the authors of the current meta-analysis, this association was close to zero and not significant in studies conducted in other labs.

Sample Size Recommendations for Future Research

Finally, with the knowledge of the average effect size associations between communal motivation and well-being, we have several recommendations regarding statistical power. Specifically,

we conducted power analyses to help researchers make the most of their time, efforts, and resources by conducting studies adequately powered to detect and extend the current findings. In Table 12, we report sample size recommendations based on the meta-analytic effect sizes identified in the current investigation. For researchers interested in computing power for the association between each form of communal motivation with a particular indicator of personal and relationship well-being, rather than for composites of well-being, they can consult results in Tables S1 to S4 on our OSF page to compute power for desired effects.

For the current results, we report sample sizes required to estimate the average meta-analytic effect sizes for key effects, as well as the sample sizes required to detect effects at the lower and upper limits of the 95% confidence intervals for the significant effects. When appropriate (i.e., significant funnel plot asymmetry was present), we computed power based on adjusted effect sizes. Attention should be paid to the average and range of recommended samples sizes, which will allow researchers to

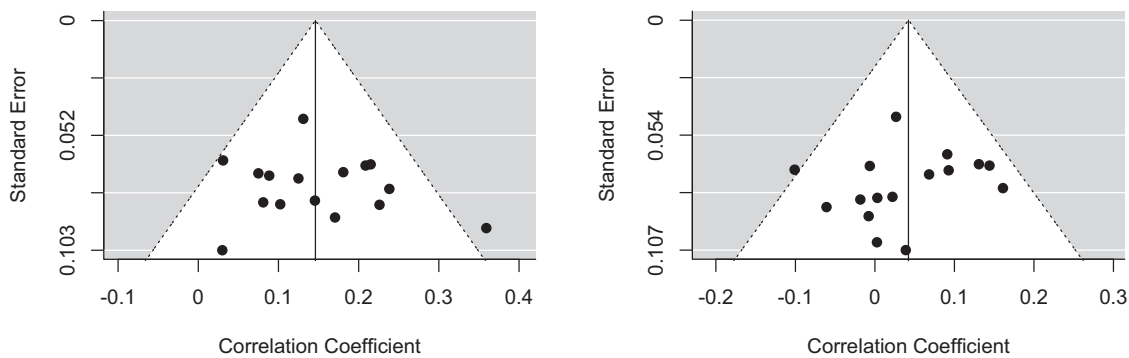


Figure 6. Funnel plots for the actor (left) and partner (right) associations between partner-specific communal motivation and personal well-being.

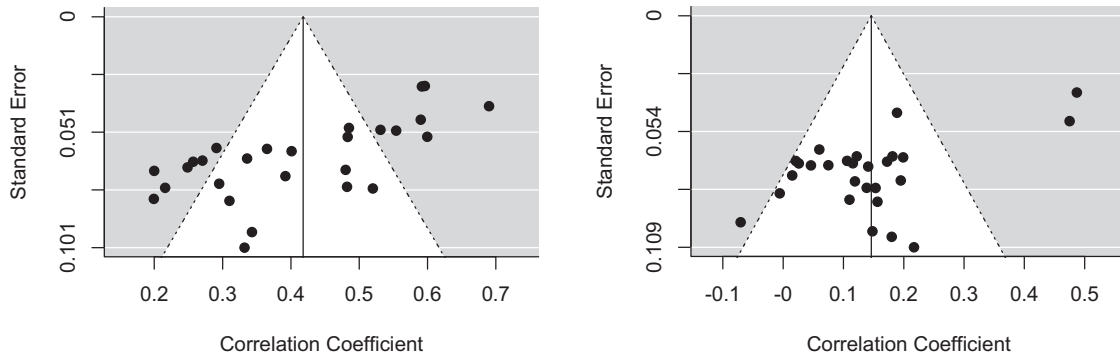


Figure 7. Funnel plots for the actor (left) and partner (right) associations between partner-specific communal motivation and relationship well-being.

gauge the appropriate level of conservatism or liberalism they prefer when recruiting participants, in addition to ascertaining information on the corresponding reliability of each sample size recommendation (i.e., narrower ranges of sample size ranges reflect more precise estimates of sample sizes).

We estimated the required sample sizes for detecting key intrapersonal and actor-partner similarity associations for a two-tailed test at alpha level .05 and 80% power using G*Power (Faul, Erdfelder, Lang, & Buchner, 2007). For the actor and partner effects, we computed power for partial r s for indistinguishable dyads using a two-tailed test at alpha level .05 and 80% power using the APIMPowerR app (Ackerman & Kenny, 2016). Models were specified as indistinguishable given that we did not find differences in our results based on the key distinguishing variable in these models (e.g., gender). We recommend that power analyses be recomputed if the dyads are distinguishable on other criteria (e.g., patient vs. caregiver). In our power analyses, we inputted the actor, partner, and actor-partner similarity effects estimated in the current investigation, in addition to inputting an estimated correlation between the errors of the outcomes at the default value of .30 in the program.¹¹

Sample size recommendations can be seen in Table 12. A number of patterns can be seen from the power estimations. First, the sample sizes needed to detect intrapersonal effects ranged widely, and thus researchers should place their focus on sample sizes needed for particular associations of interest. For researchers conducting dyadic research, they generally need at least twice the number of dyads to detect partner effects as would be needed to detect actor effects. This is true for all sample size estimates with the following exception: for the actor and partner associations between unmitigated communal motivation and relationship well-being, researchers would need a lower number of dyads to detect partner, relative to actor effects.

Discussion

The current integrative review and meta-analysis sought to establish the degree to which different forms of communal motivation are linked with subjective personal and relationship well-being for the self and relationship partners. Results collectively indicated that being communally motivated to care for the needs of

a partner is related to enriched and satisfying relationships for both members of a relationship; however, communal motivation is linked to greater personal well-being for both the self and relationship partners only to the extent that people are not self-neglecting in their communal care. All of the associations identified, besides one particularly large effect, were small to moderate in size (Cohen, 1992) and within one standard deviation of the average social psychological effect of $r = .21$, $SD = .15$ (Richard, Bond, & Stokes-Zoota, 2003).

Results from the current meta-analysis are consistent with communal relationships theory which underscores the importance of communal care in promoting satisfying relationships (Clark & Mills, 2011). The current results are also consistent with interdependence theoretical perspectives on prerelationship responses and trust. According to interdependence theory, the maintenance of high-quality relationships depends on both partners considering other factors beyond self-interest, including the welfare of the partner and relationship (Kelley & Thibaut, 1978; Rusbult & Van Lange, 2003). High communal motivation may indicate that relationship partners are able to look beyond their own self-interest to habitually consider the welfare of their partner and relationship, thereby enacting prerelationship behaviors that express those motivations to their partners, which in turn, makes partners feel more satisfied, trusting, and motivated to reciprocate those prerelationship motivations (Holmes & Rempel, 1989; Murray et al., 2006; Rempel, Holmes & Zanna, 1985; Shallcross & Simpson, 2012; Wieselquist et al., 1999). Findings from the current meta-analysis suggesting that people with high communal motivation have partners who report greater relationship well-being and similarly high levels of communal motivation could be explained from this theoretical perspective.

The current results also point to important conditions when communal motivation may not maximize personal and relationship well-being for both relationship partners. We found that unmitigated communal care was linked to greater relationship, but not

¹¹ We encourage researchers to recompute power estimates using more precise error estimates among the outcomes if that information is available. However, we note that we also computed APIM power with correlations between the errors at .10 and .50 for all effects, and sample size recommendations changed negligibly for most power estimates.

Table 7
Communal Motivation Type Moderation Tests

Measure	Larger estimate	<i>b</i> (<i>SE</i>)	<i>k</i> (<i>N</i>)			
			Total	General	Partner-specific	Unmitigated
Partner-specific vs. General						
Personal well-being						
Intrapersonal	—	.03 [†] (.02)	36 (11,112)	14 (5,732)	22 (5,379)	—
Actor	—	.002 (.03)	18 (3,673)	5 (1,197)	13 (2,476)	—
Partner	—	-.03 (.02)	18 (3,673)	5 (1,197)	13 (2,476)	—
Relationship well-being						
Intrapersonal	Partner-specific	.13*** (.02)	65 (20,532)	22 (9,369)	43 (11,163)	—
Actor	Partner-specific	.12*** (.03)	30 (8,906)	8 (4,647)	22 (4,259)	—
Partner	—	.01 (.03)	30 (8,906)	8 (4,647)	22 (4,259)	—
General vs. Unmitigated						
Personal well-being						
Intrapersonal	General	.09*** (.01)	35 (9,377)	14 (5,732)	—	21 (3,644)
Actor	General	.08* (.04)	10 (1,986)	5 (1,197)	—	5 (789)
Partner	—	.05 [†] (.03)	10 (1,986)	5 (1,197)	—	5 (789)
Relationship well-being						
Intrapersonal	—	.01 (.02)	36 (12,286)	22 (9,369)	—	14 (2,917)
Actor	—	-.01 (.03)	14 (5,670)	8 (4,647)	—	6 (1,023)
Partner	—	-.03 (.03)	14 (5,670)	8 (4,647)	—	6 (1,023)
Partner-specific vs. Unmitigated						
Personal well-being						
Intrapersonal	Partner-specific	.12*** (.01)	43 (9,024)	—	22 (5,379)	21 (3,644)
Actor	Partner-specific	.08*** (.02)	18 (3,266)	—	13 (2,476)	5 (789)
Partner	—	.02 (.02)	18 (3,266)	—	13 (2,476)	5 (789)
Relationship well-being						
Intrapersonal	Partner-specific	.14*** (.03)	57 (14,080)	—	43 (11,163)	14 (2,917)
Actor	Partner-specific	.12*** (.03)	28 (5,282)	—	22 (4,259)	6 (1,023)
Partner	—	-.02 (.03)	28 (5,282)	—	22 (4,259)	6 (1,023)

[†] $p < .10$. * $p < .05$. *** $p < .001$.

personal, well-being for both members of a relationship. Furthermore, the other forms of communal care (i.e., partner-specific and general communal motivation) tended to be more strongly associated with well-being for the self relative to unmitigated communal motivation. The current results clarify mixed findings in the literature, suggesting that in interdependent relationships, unmitigated communal care may benefit relationship partners through high levels of care and support rather than strain the relationship by smothering or annoying partners with high levels of care (Helgeson & Fritz, 1999, 2000). Our results are also consistent with interdependence theoretical perspectives that have found that concern for the welfare of a partner is more functional and beneficial when it is exclusively focused on maximizing a partner's outcomes (Kelley & Thibaut, 1978). Thus, these results suggest that while people unmitigated in their care have more satisfying relationships, both they and their partners would likely experience greater levels of both relationship *and* personal well-being should they adopt more general or partner-specific forms of communal motivation.

Results of the current meta-analysis also extend our knowledge on the gender-specificity of the link between communal motivation and well-being. We found that communally motivated men and women experience similar levels of personal and relationship well-being. Although men have barriers to entering counterstereotypic communal roles, researchers have pointed to the personal, relational, and societal benefits that may be accrued from men's greater involvement in these roles (Croft et al., 2015). The current meta-analytic results lend some support to the argument that communal roles may promote belongingness and relational needs

for men, and that these benefits are not any weaker relative to the benefits experienced by their female counterparts. Thus the current findings underscore the importance of understanding and addressing barriers that may prevent men from engaging in communal roles (Croft et al., 2015).

The current results also extend our understanding of how communal motivation is linked to well-being in relationships of varying durations. Research has indicated that communal norms decrease over the course of long-term romantic relationships (Clark et al., 2010), and it is unclear whether these drops in communal motivation are accompanied by changes in well-being within relationships. The current findings indicate that communal motivation is generally linked to greater well-being for the self in relationships of varying duration. There was one exception, indicating that people higher in unmitigated communal motivation reported greater personal well-being in longer compared with shorter relationships, a finding suggesting that the personal costs of unmitigated communal motivation dissipate with increasing relationship length. We suspect that this may be true because people in longer relationships may foster greater levels of trust among one another that they will not be exploited when providing self-neglecting care. Relatedly, people in longer relationships may be more likely to have partners who care for their needs (in a mitigated or unmitigated sense), perhaps substituting for the lack of self-care exhibited by people high in unmitigated care. After all, partners' levels of unmitigated communal motivation are correlated, suggesting that an increased tendency to neglect one's own needs is accompanied by an increased motivation in partners to meet them. This

Table 8
Gender Moderation Tests

Measure	<i>b</i> (<i>SE</i>)	Simple effect estimates <i>r</i> (<i>SE</i>)		Total	<i>k</i> (<i>N</i>)	
		Men	Women		Men	Women
General communal motivation						
Personal well-being						
Intrapersonal effect	-.02 (.02)	.11*** (.03)	.15*** (.03)	29 (4,691)	14 (2,172)	15 (2,518)
Actor effect	-.004 (.04)	.14* (.06)	.15* (.06)	12 (1,371)	6 (679)	6 (692)
Partner effect	-.002 (.03)	.09* (.04)	.09* (.04)	12 (1,371)	6 (679)	6 (692)
Relationship well-being						
Intrapersonal effect	.002 (.03)	.17*** (.04)	.17*** (.06)	35 (4,858)	17 (2,289)	18 (2,569)
Actor effect	.04 (.04)	.21*** (.05)	.14** (.05)	18 (4,861)	9 (2,423)	9 (2,437)
Partner effect	-.02 (.04)	.10† (.06)	.14* (.06)	18 (4,861)	9 (2,423)	9 (2,437)
Partner-specific communal motivation						
Personal well-being						
Intrapersonal effect	.01 (.02)	.20*** (.03)	.18*** (.03)	54 (5,969)	27 (2,515)	27 (3,454)
Actor effect	-.01 (.02)	.15*** (.03)	.16*** (.02)	32 (3,003)	16 (1,392)	16 (1,611)
Partner effect	.01 (.02)	.05† (.03)	.03 (.03)	32 (3,003)	16 (1,392)	16 (1,611)
Relationship well-being						
Intrapersonal effect	.005 (.02)	.45*** (.04)	.45*** (.03)	101 (12,981)	50 (5,418)	51 (7,563)
Actor effect	-.01 (.02)	.41*** (.03)	.43*** (.03)	53 (5,267)	26 (2,400)	27 (2,867)
Partner effect	-.01 (.02)	.13*** (.03)	.16*** (.03)	53 (5,267)	26 (2,400)	27 (2,867)
Unmitigated communal motivation						
Personal well-being						
Intrapersonal effect	.01 (.02)	-.04 (.03)	-.06* (.02)	42 (4,279)	20 (1,675)	22 (2,604)
Actor effect	-.01 (.03)	-.04 (.04)	-.02 (.04)	14 (1,109)	7 (509)	7 (600)
Partner effect	-.01 (.03)	-.01 (.04)	.01 (.04)	14 (1,109)	7 (509)	7 (600)
Relationship well-being						
Intrapersonal effect	.05 (.03)	.19*** (.05)	.09† (.05)	32 (3,148)	16 (1,412)	16 (1,736)
Actor effect	.02 (.05)	.12† (.07)	.08 (.07)	16 (1,343)	8 (675)	8 (668)
Partner effect	-.08 (.05)	.08 (.07)	.23** (.07)	16 (1,343)	8 (675)	8 (668)

† $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

compensatory effect may be particularly important as people encounter greater stresses that require high degrees of care, such as when partners lose a job or loved one. It will be important for future research to examine whether relationship duration moderates the association between well-being and the communal motivation of partners, given that we had low power to examine moderating effects of relationship length for both partners in the current meta-analysis.

In addition to advancing theory on communal motivation and well-being, one important goal of the current meta-analysis was to

assess bias in the estimates of communal motivation and well-being. Overall, we found little evidence for bias. Tests of funnel plot asymmetry indicated little bias in the meta-analytic effects tested, and when bias was present, adjusted estimates were negligibly different from uncorrected effect size estimates. We also found that results were consistent across publication status, a promising finding that provides confidence in the magnitude of the currently published intrapersonal effects on communal motivation and well-being. While these tests of bias provide confidence in the intrapersonal effects established in the current meta-analysis and

Table 9
Relationship Length Moderation Tests for Intrapersonal Effects

Measure	<i>b</i> (<i>SE</i>)	Simple effect estimates <i>r</i> (<i>SE</i>)		<i>k</i> (<i>N</i>)
		Shorter relationship length (-1 <i>SD</i> = .20 years)	Longer relationship length (+1 <i>SD</i> = 12.60 years)	
General communal motivation				
Personal well-being	.003 (.01)	.14** (.05)	.10 (.13)	7 (1,351)
Relationship well-being	-.01 (.004)	.24*** (.03)	.34*** (.08)	16 (7,144)
Partner-specific communal motivation				
Personal well-being	-.001 (.01)	.16*** (.02)	.17*** (.05)	24 (5,395)
Relationship well-being	-.001 (.01)	.44*** (.03)	.44*** (.08)	42 (10,789)
Unmitigated communal motivation				
Personal well-being	-.01 (.01)	-.06 (.04)	.07 (.09)	8 (1,212)
Relationship well-being	-.02** (.01)	.13*** (.03)	.32*** (.08)	8 (1,352)

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

Table 10
Publication Status Moderation Tests for Intrapersonal Effects

Measure	<i>b</i> (<i>SE</i>)	Simple effect estimates <i>r</i> (<i>SE</i>)		Total	<i>k</i> (<i>N</i>)	
		Unpublished	Published		Unpublished	Published
General communal motivation						
Personal well-being	.001 (.02)	.12*** (.02)	.12** (.04)	16 (6,181)	12 (4,157)	4 (2,023)
Relationship well-being	.05† (.03)	.14** (.04)	.25*** (.04)	24 (9,735)	11 (3,994)	13 (5,741)
Partner-specific communal motivation						
Personal well-being	.01 (.03)	.16*** (.02)	.17*** (.05)	26 (5,901)	22 (4,831)	4 (1,070)
Relationship well-being	-.04 (.03)	.47*** (.03)	.39*** (.05)	53 (13,417)	40 (10,367)	13 (3,050)
Unmitigated communal motivation						
Personal well-being	-.02 (.02)	-.04* (.02)	-.09*** (.03)	26 (4,901)	16 (3,044)	10 (1,857)
Relationship well-being	.02 (.08)	.11** (.04)	.16 (.16)	17 (3,402)	16 (3,168)	1 (234)

† $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

broader research literature, it will be important in future research to examine these forms of bias in dyadic data, because we had low power to do so.

In an additional test of bias, we found that results were consistent across research labs with the exception of one effect. Specifically, we found that unmitigated communal motivation was linked to greater relationship well-being for the self in data collected from the current authors but not in data from other labs. In a post hoc examination of this result, differences in estimates between research labs could not be attributed to differential use of samples (i.e., clinical, dyadic, or Mechanical Turk) nor to the use of measures of unmitigated communal motivation (i.e., targeted at specific partners vs. generally). However, given that the magnitude of effect size differences were decreased most between labs when accounting for partner-specific measures of unmitigated communal motivation, we examined this factor more broadly by testing it as a moderator across the entire sample. In doing so, we found that the use of partner-specific measures significantly explained when unmitigated communal motivation was linked with greater relationship well-being, while the other factors (use of clinical, dyadic, and Mechanical Turk samples) did not.¹²

These results suggest that self-neglecting communal care may only be linked to increased relationship well-being when this care is targeted toward a specific relationship partner, rather than more generally in nature. Relative to unmitigated communal motivation in a particular relationship, general unmitigated communal motivation may reflect a more severe neglect of one's own needs (i.e., prioritizing many others over the self), potentially explaining why general unmitigated communal motivation is less beneficial for the self. These results also dovetail with the finding that unmitigated communal care is related to more satisfying relationships in longer, relative to shorter, relationships. Perhaps the costs of unmitigated communal care are attenuated, and the benefits magnified, when unmitigated communal motivation occurs in situations that foster personal need fulfillment, either because the person high in unmitigated communal motivation is circumscribed to a particular partner, or because the care occurs within relationship contexts in which partners reciprocate communal motivation and are unlikely to engage in exploitation. While at the outset of the current research we did not aim to distinguish between general and partner-specific unmitigated communal motivation given that the distinction between the two had yet to be made in the published

literature, the current results suggest that this distinction is important to examine in future research, especially across different labs.

Implications

The dyadic examination of communal motivation in the current work sheds light on the reciprocal benefits of communal care among relationship partners. Across cultures, prosocial behavior and care have been linked to intrinsic joys for those who give to others, including to friends, family, romantic partners, coworkers, and strangers (Aknin et al., 2013; Chancellor, Margolis, Jacobs Bao, & Lyubomirsky, 2017; Crocker & Canevello, 2008; Crocker et al., 2017; Impett & Gordon, 2008; Keltner, Kogan, Piff, & Saturn, 2014; Kogan et al., 2010; Le & Impett, 2015; Le et al., 2013; Lemay et al., 2007; Reis, Maniaci, & Rogge, 2014, 2017). The current results linking communal motivation to greater personal well-being are consistent with this broader research on the personal rewards of prosociality. The intrinsic rewards of communal care may also function to bolster people in creating more satisfying relationships, through providing desired care to others, and promoting reciprocal care in return. Our results also extend theory concerning the costs of prosocial and other-oriented motivation (Bolino & Grant, 2016; Crocker et al., 2017). Although in the current work we found little well-being costs related to caring, our findings highlight conditions under which communal care, and perhaps prosociality more broadly, may be mutually rewarding in

¹² The moderation by lab in detecting the intrapersonal association between unmitigated communal motivation and relationship well-being remains significant after dropping clinical samples, dyadic samples, Mechanical Turk samples, and samples using adapted measures of unmitigated communal motivation to target specific relationship partners (which the current authors tend to use) rather than for others more generally (interactions: $.07 \leq bs \leq .12$, $.03 \leq SEs \leq .04$, $ps \leq .03$). When assessing these moderating factors across the entire sample, the use of clinical, dyadic, and Mechanical Turk samples did not significantly moderate the intrapersonal association between unmitigated communal motivation and relationship well-being (interactions: $1.011 \leq bs \leq 1.071$, $.04 \leq SEs \leq .06$, $ps \geq .06$); however, the use of general versus partner-specific measures of unmitigated communal motivation did (interaction: $b = .11$, $SE = .03$, $p < .0001$, $k = 17$, $N = 3,402$; general unmitigated communal motivation measure simple effect: $b = .04$, $SE = .05$, $p = .30$, $k = 11$, $N = 2,057$; partner-specific unmitigated communal motivation measure simple effect: $b = .26$, $SE = .04$, $p < .0001$, $k = 6$, $N = 1,345$).

Table 11
Lab Status Moderation Tests for Intrapersonal Effects

Measure	<i>b</i> (<i>SE</i>)	Simple effect estimates <i>r</i> (<i>SE</i>)		<i>k</i> (<i>N</i>)		
		Other researchers	Current authors	Total	Other researchers	Current authors
General communal motivation						
Personal well-being	.004 (.03)	.12** (.02)	.13** (.05)	16 (6,181)	12 (5,417)	4 (763)
Relationship well-being	-.04 (.04)	.21*** (.04)	.13† (.07)	24 (9,735)	19 (8,800)	5 (935)
Partner-specific communal motivation						
Personal well-being	-.003 (.02)	.17*** (.04)	.16*** (.02)	28 (6,248)	6 (1,227)	22 (5,020)
Relationship well-being	.003 (.03)	.44*** (.06)	.44*** (.03)	55 (13,764)	9 (1,318)	46 (12,446)
Unmitigated communal motivation						
Personal well-being	.03 (.02)	-.07*** (.02)	-.02 (.03)	26 (4,901)	21 (1,017)	5 (3,884)
Relationship well-being	.10** (.03)	.01 (.05)	.20*** (.04)	17 (3,402)	8 (1,308)	9 (2,094)

† $p < .10$. ** $p < .01$. *** $p < .001$.

close relationships: when both individuals care for one another, but do not neglect their own needs.

Limitations and Future Directions

Although teasing apart directionality was beyond the scope of the current meta-analysis, it is important to note that we cannot determine from the current results whether higher communal motivation leads to greater well-being, greater well-being leads to greater communal motivation, or both. Although some research has indicated that manipulations of communal motivation predict greater personal and relationship well-being (Day et al., 2015; Le & Impett, 2015), at least one study has documented the causal role of emotional well-being, and in particular feelings of gratitude, in boosting communal motivation (Lambert, Clark, Durtschi, Fincham, & Graham, 2010). This existing work suggests that the link between communal motivation and well-being may be bidirec-

tional. Although correlational methods have been important in this line of research to examine communal motivation and well-being naturalistically, future research could benefit from additional experimental studies to further tease apart the link between communal motivation and well-being.

Another potential limitation of the current work is that we were unable to determine the unique effects of each form of communal motivation (i.e., while controlling for the other types) in predicting well-being, given that only two studies in our meta-analysis included all three measures of communal motivation. Examining how different forms of communal care uniquely predict well-being may be an important future direction. However, it is important to note that each form of communal motivation predicted unique patterns of well-being in the current meta-analysis, and to different degrees, suggesting that they may play unique roles in shaping well-being.

Another important future direction of the current work will be to identify mechanisms that explain the associations between communal motivation and well-being. Research has previously shown that projecting one's own care onto a relationship partner may build feelings of security and satisfaction between communal relationship partners (Lemay & Clark, 2008; Lemay et al., 2007). In addition, when caring for others, communally motivated individuals tend to feel that they are behaving in a way which authenticates their sense of self as giving, caring people, which promotes their relationship satisfaction (Kogan et al., 2010; Le & Impett, 2015). Although existing research has identified a couple of mechanisms (i.e., projection of communal care, feeling authentic), identifying others and honing in on the most explanatory and powerful mechanisms is a fruitful area for future research.

Although the current research identified how chronic, between-person tendencies to be communal are linked to well-being, future research may benefit from examining how individuals regulate provision of care within their daily lives. For instance, amplification of communal care—perhaps by people who have low baseline levels of communal motivation—may promote more intimate and satisfying relationships. In the same vein, highly caring people, such as those unmitigated in their communal motivation, may experience greater well-being to extent that they dampen their care in contexts in which they may be hurt or exploited. In addition, dampening communal care at times may enable relationship part-

Table 12
Sample Size Recommendations for Desired Effect Sizes

Measure	Personal well-being	Relationship well-being
General communal motivation		
Intrapersonal effect	540 [301, 1221]	191 [111, 459]
Actor effect	150 [56, 1070]	118 [52, 475]
Partner effect	475 [196, 4281]	318 [118, 4281]
Partner-specific communal motivation		
Intrapersonal effect	301 [191, 459]	35 [27, 46]
Actor effect	158 [109, 294]	20 [16, 27]
Partner effect	2224 [556, 35594]	158 [88, 439]
Unmitigated communal motivation		
Intrapersonal effect	2175 [964, 8716]	540 [212, 4900]
Actor effect	—	309 [77, 37478]
Partner effect	—	221 [84, 2342]

Note. Numbers reflect sample sizes needed to detect desired effects based on effect sizes from the current meta-analysis. Power analyses were conducted at $\alpha = .05$ and 80% power using a two-tailed test. Sample sizes outside of brackets are derived from the average meta-analytic effects, sample sizes within brackets are derived from the upper and lower limits of the 95% confidence intervals of the average meta-analytic effects. Values in the intrapersonal row refer to number of individuals; values in the actor and partner rows refer to number of dyads.

ners to avoid developing patterns in which one person is heavily reliant on the other to provide self-neglecting care.

It will also be important to study communal motivation accounting for the unique context generated by two relationship partners (Finkel, Simpson, & Eastwick, 2016). For instance, how might communal motivation change as romantic couples become families? As romantic couples transition to parenthood and face the challenges and opportunities of welcoming a baby to their family, they may have a temporarily reduced motivation to provide communal care for each other as they provide communal care for a newborn child. Examining these shifts in communal motivation—and associated shifts in well-being—will be important in understanding what the optimal balance of care may be in families, or perhaps how couples may ride out difficult times of reduced communal care. In a similar vein, it will be important to understand how macrolevel external factors—such as the presence of extended social networks, demands of work, and financial stressors—impact partners' balance in communal care and related well-being.

Finally, future research can also benefit from examining how communal motivation is linked to well-being across different cultures. All but two samples included in the current meta-analysis were derived from North America and Europe, which are considered independent cultures. The links between communal motivation and well-being may diverge from the present results when participants live in interdependent cultures, where a focus on the self, relative to relationship partners, is relatively diminished (Markus & Kitayama, 1991). It is possible that the link between unmitigated communal motivation and enhanced personal and relationship well-being may be stronger in interdependent relative to independent cultures, given that interdependent cultures may have stronger norms to provide (and receive) self-neglecting degrees of care.

Conclusion

Communal motivation to care for the welfare of others is a core component of close relationships. Results from the current meta-analysis indicate that communally motivated people and their close relationship partners experience greater relationship well-being, underscoring the importance of showing care and concern for building and maintaining satisfying relationships. Whereas communal motivation is clearly linked with relationship benefits, we also found that personal well-being is maximized only to the extent that people are not self-neglecting in their communal care. The current findings shed light on the costs, benefits, and boundary conditions under which communal care for others is personally and relationally rewarding.

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References marked with asterisks indicate articles included in the meta-analysis. * = paper includes key effect sizes, ** = effect sizes drawn from raw data that appears in paper.

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(Appendices follow)

Appendix A

Partner-Specific Communal Motivation Scale

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1. Helping him/her is a high priority for me.
 2. I could easily put his/her needs out of my thoughts.
 3. I care for him/her.
 4. I care about his/her well-being.
 5. I could easily accept not helping him/her.
 6. I would sacrifice very much to help him/her.
 7. I would incur a large cost in order to help him/her.
 8. I care for his/her needs.
 9. I would go out of my way to help him/her.
 10. I would be reluctant to sacrifice for him/her.
-

Note. Items are from the Lemay and Neal (2013) scale rated from 1 = *extremely disagree* to 9 = *extremely agree*. Instructions prompt participants to answer with regard to their current romantic partner, with the instructions being adaptable to refer to other relationship partners.

Appendix B

Sexual Communal Motivation Scale

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1. How far would you be willing to go to meet your partner's sexual needs?
 2. How readily can you put the sexual needs of your partner out of your thoughts?^a
 3. How high a priority for you is meeting the sexual needs of your partner?
 4. How easily could you accept not meeting your partner's sexual needs?^a
 5. How likely are you to sacrifice your own needs to meet the sexual needs of your partner?
 6. How happy do you feel when satisfying your partner's sexual needs?
-

Note. Items are from the Muise, Impett, Kogan, and Desmarais (2013) scale rated from 0 = *not at all* to 4 = *extremely*. Instructions prompt participants to respond with regard to their current romantic partner.

^a Reverse-scored.

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