Relational Orientation Styles and Relationship Quality:
Sacrifice Motives in Romantic Relationships

by
Lisa Do Couto

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ABSTRACT

RELATIONAL ORIENTATION STYLES AND RELATIONSHIP QUALITY: SACRIFICE MOTIVES IN ROMANTIC RELATIONSHIPS

Lisa Do Couto                      Advisor:          Karl Hennig
University of Guelph, 2019

Positive and fulfilling close interpersonal relationships provide numerous benefits for individuals. Relational orientation styles have previously been linked to differences in the quality of these close relationships; however, there is a limited understanding of how relational orientation styles impact behaviours in relationships that lead to these differences. Sacrifice behaviours, and in particular sacrifice motives, have been known to impact the quality of close relationships. The current research examined the links between relational orientation styles, sacrifice motives, and relationship quality. In study 1, 455 individuals in a romantic relationship completed a cross-sectional survey in order to investigate the relational orientation model of sacrifice motives and relationship quality. Greater interdependent self was related to sacrifices for both approach and avoidance motives, and overall positive relationships. Whereas individuals with greater silencing self, the maladaptive relational orientation style, reported sacrificing in order to avoid negative consequences and described poorer relationship quality. In study 2, 84 romantic couples completed a 7-day daily experience study. Sacrifice frequency was low and participants on average only reported making a sacrifice on average once a week. The low sacrifice frequency prevented a full investigation of the dyadic relational orientation model of sacrifice motives and relationship quality; although direct effects found in study 1 were supported. Further, perceptions of a partner’s sacrifice motives were examined. Participants’
perceptions of their partner’s approach sacrifice motives were based on an assumed similarity bias, whereas perceptions of avoidance sacrifice motives were based on both an assumed similarity bias and a partner’s actual avoidance motives. Participants experienced positive relationship quality when they accurately perceived their partner’s approach sacrifice motives and when their partners over perceived their own avoidance sacrifice motives. The current research extends understandings of relational orientation styles and their impact on behaviours, motives, perceptions, and quality of romantic relationships.
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Relational Orientation Styles and Relationship Quality: Examining Sacrifice Motives in Romantic Relationships

Chapter 1: General Introduction

The desire for close relationships is considered a shared fundamental human need (Baumeister & Leary, 1995). Prioritizing these close relationships (e.g. engaging in ways that are relationally orientated) and investing time and effort into them has many benefits, such as creating more fulfilling relationships (Morry & Kito, 2009). Researchers, however, have also documented negative correlates of relational orientation (Bornstein, 1992). A greater concern with relationships has been linked to a greater sensitivity to interpersonal stressors and a predisposition for depressive symptoms (Connor-Smith & Compas, 2002). In short, although relational orientation has been associated with relational benefits (e.g., satisfying relationships) it also comes with personal costs (e.g., increased risk of depression; Rudolph & Conley, 2005). In an attempt to understand these contradictory findings, investigators developed a multifaceted model of relational orientation which proposes that there are three distinct facets, interdependent self, sacrificial self, and silencing self, that represent different styles of relating and connecting to close others (Hennig & Walker, 2008; Pincus & Gurtman, 1995).

These relational orientation styles (or facets) all share a common desire to maintain close relationships. However, they differ in the extent to which personal needs are subordinated for the relationship. The most maladaptive style involves partners who consistently suppress their needs for fears of upsetting the relationship partner, which leads to less fulfilling relationships (e.g., Hennig & Walker, 2008). Yet, other research has found that sacrifices in relationships are critically important in maintaining long lasting relationships (e.g., Van Lange et al., 1997). Investigators have argued that the distinction between good and bad sacrifices lie in the motivation underlying the behaviour (Impett, Gable, & Peplau, 2005). Specifically, that
sacrifices based on approach motives (i.e., to make my partner happy) lead to positive relational outcomes and sacrifices based on avoidance motives (i.e., to avoid an argument) lead to negative relational outcomes.

The general purpose of the current research is to examine the possible mechanisms accounting for the differential associations between relational orientation styles and relationship outcomes. The central hypothesis to be examined is that distinct relational orientation styles will influence the extent to which individuals use approach and avoidance motivated sacrifice, accounting for distinct associations with relationship quality.

**Close Relationships: The Importance of Relationship Quality**

Close interpersonal relationships satisfy an important human need to belong (Baumeister & Leary, 1995). Involvement in long-term romantic relationships has been consistently associated with greater well-being (Dush & Amato, 2005; Proulx, Helms & Buehler, 2007) and fewer mental health difficulties (Braithwaite, Delevi & Fincham, 2010). Individuals with supportive relationships are better able to cope with daily stressors (Shulman, 1993). Some investigators have proposed that the trust and companionship garnered from relationships are the important qualities which lead to greater happiness (Demir, 2008). However, others have shown that close interpersonal relationships can sometimes be detrimental. Higher stress reactivity (Berry & Worthington, 2001), higher ambulatory blood pressure (Holt-Lunstad, Birmingham & Jones, 2008), and an increased risk of depressive symptoms (Joyner & Udry, 2000) have been documented for some individuals in unsatisfying romantic relationships. Overall, this suggests that close relationships can have both positive and negative effects for well-being.

Researchers have focused on identifying the qualities of relationships that lead individuals to persist and thrive in their relationships (Fletcher, Simpson & Thomas, 2000).
Relationship quality can be broadly defined as the subjective evaluation of one’s relationship on a number of dimensions (Spanier & Lewis, 1980). Despite the wide agreement that relationship quality is an important variable in relationship research, there is large diversity in its conceptualization. The most widely studied and used conceptualization of relationship quality is Rusbult’s Investment Model (Rusbult, 1980; Rusbult, Martz & Agnew, 1998). It proposes that individuals persist in relationships due to their level of commitment and dependence on the relationship which is determined by their satisfaction in the relationship, their perception of the quality of alternative relationship partners, and the size of their investment in the relationship (Rusbult, Martz & Agnew, 1998). Other investigators have identified six dimensions of relationship quality: satisfaction, commitment, trust, closeness, passion, and love (Fletcher et al., 2000). An examination of a layperson’s conceptualization of relationship quality indicated that intimacy, sexuality, agreement, and independence are important components that individuals consider when evaluating their relationships (Hassebrauk & Fehr, 2002).

For the purpose of the current research, Study 1 conceptualized and examined relationship quality following Rusbult’s (1980) commonly used model of satisfaction and commitment. However, Study 2 measured relationship quality using the dimensions of satisfaction, closeness, love, as well as experiences of conflict, disappointment, and rejection from their partners, inline with other research (Impett et al., 2013). This allowed for daily fluctuating experiences that shape individuals’ evaluations of their relationships.

**Gender & Relational Orientation Styles: A Multifaceted Model**

Women and men differ in how they approach and experience relationships. Women have been found to focus more on, devote more to, and extract more psychologically meaningful information from their relationships than men (Crick & Zahn-Waxler, 2003). The outcomes
associated with this greater focus on relationships have been mixed. Women in relationships reportedly experience lower self-esteem (Moran & Eckenrode, 1991), greater empathetic distress (Connor-Smith & Compas, 2002), and greater depression (Blatt & Zuroff, 1992; Smith & Rose, 2011) than their male counterparts. Yet other studies have documented positive correlates, such as empathic concern for others (Cross, Bacon & Morris, 2000), greater prosocial behaviours (Cross & Madson, 1997), being more accommodative of partners (Hennig & Walker, 2008), and generally experience more harmonious relationships (Gabriel & Gardner, 1991).

Crick and Zahn-Waxler (2003) called for investigators to develop measures of women's "relational orientation" in an effort to better understand the relationship between gender and negative (as well as positive) outcomes. Relational orientation, broadly defined, reflects the extent to which individuals desire close relationships with others and are oriented cognitively, emotionally, and behaviourally towards these relationships. Hennig and Walker (2008) developed a multifaceted model of relational orientation by "projecting" existing measures and their respective items onto the interpersonal circumplex (see also Pincus & Gurtman, 1995). The interpersonal circumplex conceptualizes agency and communion as the two fundamental modalities of human functioning (Wiggins, 1991). Agency refers to self-governance and ranges from dominant, acting based on internal needs (mastery, self-efficacy), to submissive, acting based on external influences (compliant, cooperative). Communion refers to the connection between people (getting along), and ranges from cold to warm (Wiggins, 1991). The various measures of relational orientation were found to project onto the lower right, friendly-submissive quadrant, which previous research has shown to lay along the point of maximal male-female gender differences (i.e., the "gender axis"). Hennig and Walker (2008) demonstrated that, among the various measures, three distinct facets of relational orientation (RO) were found ranging from...
adaptive (RO+) to maladaptive (RO-) styles. The three styles (or facets) reflect three separate "octants" within the interpersonal circle defined by agency and communion. As measures (and items) move from RO+ to RO- the measures reflected decreased agency (or greater submissiveness) and lower communion. A third style reflected a blend of RO+ and RO-, hence RO+/-.

All three styles involve a strong desire for close relationships; however, they differ in the strength of their bond and the extent to which one’s needs are subordinated (sacrificed) to maintain the relationship. These styles are individually marked by distinct interpersonal values (Locke, 2000) and interpersonal problems (Alden, Wiggins & Pincus, 1990). Towards the adaptive end of the continuum, interdependent self (RO+) values feeling genuinely connected to and supported by others and reflects an even balance between both partner’s needs (e.g., “My close relationships are an important reflection of who I am”). At the opposite, maladaptive end of this continuum, silencing self (RO-) values not upsetting relationship partners and involves being overly submissive to the extent that their connection with others is limited (e.g., “I keep silent if I think my opinion might create conflict”). Individuals high in RO- anticipate criticism and rejection from their partners. Representing a blend of risk and benefit, sacrificial self (RO+/-), the mid-point on the continuum, values being liked by their partners by placing other’s needs above one’s own (e.g., “Before I can be happy, others have to be cared for first”).

Consistent with their underlying interpersonal octants, gender differences emerge on the two facets towards the adaptive end of the continuum, the interdependent (RO+) and sacrificial self (RO+/-; Lippa, 1995). Specifically, women define themselves by their relationships (RO+) and place others' needs above their own (RO+/-), more than do men. Yet, men and women are equally as likely to repress or silence the expression of their needs where doing so might create
greater conflict in the relationship (silencing self; Hennig & Walker, 2008). While the term "self-silencing" had emerged out of early feminism (e.g., Gilligan, 1982) to represent the sacrificial acts women carried out to preserve relationships, this finding shows that males similarly silence themselves in relationships. Self-silencing is often focused more on self-preservation of anticipated criticism from others, than enacted for the benefit of a harmonious relationship.

These relational orientation styles reflect underlying individual differences in interpersonal values, motivations and behaviours (Locke, 2000), and can be expressed as three markers along an adaptive-maladaptive continuum as indicated above. Research has confirmed that the relational orientation styles are differentially related to distinct personal (e.g., emotional well-being) and relational outcomes (e.g., social competence, relationship satisfaction). RO+ is associated with positive relational outcomes, such as social competence skills and relationship satisfaction, but not related to negative personal outcomes (Cross, Morris & Bacon, 2000; Do Couto & Hennig, 2015; Hennig, 2019). On the other end of the continuum, RO- is related to negative personal outcomes, such as increased emotional distress, but not related to positive relational outcomes (Hennig, 2019). At the midpoint on the continuum, RO+/- is related to both negative personal outcomes (e.g. increased emotional distress) and positive relational outcomes (e.g. social competence skills, relationship satisfaction; Do Couto & Hennig, 2015; Hennig, 2019).

There has been little research examining why relational orientation styles are linked to these different outcomes. Agency, the balance between self and partners’ needs, cuts across all facets of relational orientation, with RO- reflecting the possible greatest degree of self-sacrifice. However, even though sacrifice is thought to be an inevitable aspect of all successful relationships (Van Lange et al., 1997), silencing self remains the most maladaptive relational
orientation style. This discrepancy may be related to an individual’s perception that their behaviour, self-sacrifice, is due to external factors, such as avoiding upsetting their relationship partner, and thus extrinsically motivated (La Guardia & Patrick, 2008). The feeling of agency over one’s behaviour and the ability to act authentically as one’s self, is defined as a fundamental human need for well-being according to self-determination theory (Deci & Ryan, 2000). This suggests that relational orientation styles may lead to differences in sacrifice motivations which in turn accounts for differences in relationship quality.

**Sacrifice in Close Relationships: A Social Motivation Model**

Sacrifice involves an individual moving away from their own self-interests and promoting their partner’s interests (Rusbult & Van Lange, 2003). Sacrifices can include both small everyday concessions (i.e., choosing to watch a partner’s preferred movie) as well as significant life-changing decisions (i.e., choosing to move to a new country for your partner’s career). Sacrifice behaviours have been described as a transformation of motivation from self to the relationship (Holmes & Rempel, 1989) and provide a clear indication of a partner’s commitment to the relationship (Kelley & Thibaut, 1978; Wieselquist, Rusbult, Foster, & Agnew, 1999). Sacrifice behaviours have been identified as an important behavioural mechanism that fosters commitment in relationships (Rusbult et al., 2001), as it influences the other partner’s willingness to sacrifice and become dependent on the relationship that works to create a positive cyclical pattern (Wieselquist et al., 1999).

Sacrificing has been associated with positive outcomes, such as greater relationship commitment (Totenhagen, Curren, Serido & Butler, 2013; Van Lange et al., 1997), satisfaction (Ruppel & Curan, 2012), intimacy (Figuерres, 2008), and relationship persistence (Stanley, Whitton, Sadberry, Clements & Markman, 2006). However, other studies have documented the
costs of sacrifices, such as increased emotional distress (Harper & Welsh, 2007) and more negative social interactions (Aube, 2008). This is also in line with research that suggests the subordination of personal needs negatively affects well-being and leads to a heightened risk for depression (Jack & Dill, 1992; Fritz & Helgeson, 1998).

In an attempt to make sense of these conflicting findings, researchers have begun examining the motivations underlying sacrifice. According to Gable’s (2006) model of social motivation, interpersonal behaviour can be explained by two distinct motivational systems – approach and avoidance. This is consistent with evidence suggestive of separate appetitive and aversive behavioural systems that have distinct neurobiological mechanisms (Harmon-Jones & Allen, 1997; Sutton & Davidson, 1997). The appetitive system activates behaviour based on signals of rewards, while the aversive system suppresses behaviour based on signals of punishment (Gray, 1990). Likewise, in relation to social behaviour, approach motives predispose individuals to aim to increase interpersonal rewards (e.g. trust, intimacy) and avoidance motives predispose individuals to aim to decrease interpersonal pain (e.g. conflict, rejection). They are manifest in a hope for affiliation and a fear of rejection, respectively (Mehranbian & Ksionzky, 1974; Gable, 2006). Although these two motivational systems function independently, they do not necessarily counteract each other and are both considered important to successfully navigate the world (Higgins, 1997; Gable, Reis & Elliot, 2003). In fact, previous studies have found that approach and avoidance motives are positively associated with each other (Gable, 2006; Impett, Gable & Peplau, 2005).

Research has found that motivations can bias individuals’ perceptions of their environment and their relationships. Specifically, individuals high in approach motivation tend to rate their social interactions more positively, tend to seek out positive events, and experience
more positive emotions (Reis & Elliot, 2000; Nikitin & Freund, 2010), whereas individuals high in avoidance motivation are more likely to remember negative information, interpret ambiguous social cues negatively, and evaluate others pessimistically (Gable et al., 2000; Nikitin & Freund, 2010; Strachman & Gable, 2006). These distinct social motivations also affect global evaluations of relationship satisfaction. For example, individuals high in approach motivation will base their evaluations on the presence and absence of positive feelings of passion while individuals high in avoidance motivation will base their evaluations on the presence and absence of negative feelings of insecurity (Gable & Poore, 2008). Therefore, approach and avoidance motivations may help explain differences in the costs and benefits of sacrifice in close relationships.

In terms of sacrifice behaviour, approach motives include wanting to ensure the partner’s happiness and hoping to foster greater relationship closeness, while avoidance motives include wanting to avoid conflict and potential relationship dissolution. Research suggests that the motives underlying a sacrifice are an important contributor to its beneficial and harmful properties (Impett et al., 2005; Impett, Gere, Kogan, Gordon & Keltner, 2013; Impett, Javam, Le, Asyabi-Eshghi, & Kogan, 2013). This has been demonstrated consistently in opposite sex and same sex romantic relationships (Cooper, Totenhagen, Curran, Randall & Smith, 2017). Individuals who engage in approach motivated sacrifices report experiencing more positive emotions, positive relationship quality and less relationship conflict. Approach motivated sacrifices are also related to relationship persistence three months later (Impett et al., 2005). In contrast, individuals who engage in avoidance motivated sacrifices report experiencing more negative emotions, less positive relationship quality, and more relationship conflict (Impett et al., 2005; Impett, Gere et al., 2013; Impett, Javam et al., 2013). These results suggest that approach and avoidance sacrifice motives are related to distinct outcomes.
The approach-avoidance model of social motivation acknowledges the importance of individual differences in shaping the sensitivity of the approach and avoidance motivation systems (Gable, 2006). In fact, attachment has been examined as a source of individual differences in the motivation systems. Securely attached individuals, who expect that their needs will be reliably met by their relationship partner, report more approach motivations in close relationships likely because they are able to focus on the benefits of the relationship. Whereas, anxiously or avoidantly attached individuals, who do not expect their relationship partner to consistently meet their needs, report greater avoidance motives likely because relationships are associated with high levels of risk (Locke, 2008). Therefore, mental representations of close relationships impact approach and avoidance sacrifice motives in close relationships. Given that relational orientation styles represent distinct mental representations of close relationships, it can be expected that they may also be associated with distinct approach and avoidance system sensitivities.

**The Current Research**

The multifaceted model of relational orientation accounts for the differential associations with relationship outcomes (Do Couto & Hennig, 2015; Hennig & Walker, 2008). However, there is no research examining *how* relational orientation styles lead to these distinct outcomes in relationships. The current research aimed to address this question by examining how relational orientation styles influence individuals to behave differently in romantic relationships, particularly why they chose to sacrifice for their partners.

Two studies were conducted to address this question. Study 1 preliminarily examined the associations between relational orientation styles, sacrifice motives, and relationship outcomes using a cross-sectional study design of individuals in romantic relationships. Study 2 examined
the effects of relational orientation on relationship outcomes by investigating the day-to-day experience and perceptions of sacrifices in relationships. Couples in romantic relationships completed a 7-day daily experience study. It was expected that relational orientation styles would lead to different relational outcomes, as a result of differences in sacrifice motives.
Chapter 2: Study 1

Research indicates that positive close relationships are important for overall well-being (Proulx, Helms & Buehler, 2007). There has been a large body of research examining individual differences in order to understand why some people are able to achieve positive and beneficial close relationships, while others are not. A source of individual differences that has been examined are relational orientation styles. Specifically, interdependent self (RO+) and sacrificial (RO+/-) self has been shown to be related to positive relationship quality, while silencing self (RO-) has been related to less positive relationships (Hennig & Walker, 2008). However, to date there has been no research examining how relational orientation styles lead individuals to act differently in relationships, which may account for the different relationship outcomes. Sacrifice is an important behaviour in close relationships that may account for these differences.

A Relational Orientation Model of Sacrifice Motives and Relationship Quality

Relational orientation, a concern with interpersonal relationships, originated to help investigators understand the adaptive buffering effects of relationships, as well as, the maladaptive aspects that places stressors on individuals. Three styles of relational orientation that exist on a continuum from adaptive to maladaptive have been identified to explain these findings. Overall, the relational orientation model of sacrifice motives and relationship quality, purports that sacrifice motives act as intervening variables that account for the different outcomes associated with each relational orientation styles.

RO+ as the most adaptive relational orientation style, has been shown to be associated exclusively with positive relationship outcomes (Hennig & Walker, 2008), and more optimistic relationship evaluations (Cross et al., 2002). Individuals with greater RO+ have been noted to engage in more pro-relationship behaviours, such as greater self-disclosure and responsiveness to
their partner’s self-disclosure (Do Couto & Hennig, 2015; Morry & Kito, 2009), as well as greater expressions of gratitude towards their partner, due to their communal orientation (Mattingly, Oswald & Clark, 2011). In fact, RO+ is related to a greater integration of both self and partner needs, and less zero-sum perceptions of conflicting interests (Gore & Cross, 2009). Although there have been no studies examining interdependent self and sacrifice, research has indicated that a greater communal orientation is linked to a greater general willingness to make sacrifices for relationship partners (Day & Impett, 2018) and to experience more positive emotions during sacrifices (Kogan et al., 2010). These findings suggest that RO+ will be related to approach motivated sacrifices, as well as, positive relationship quality. Specifically, greater relationship quality is likely due to greater approach motivated sacrifices, while avoidance motivated sacrifices will not negatively affect relationship quality.

**RO-** at the maladaptive end of the relational orientation continuum, has been associated primarily with negative personal outcomes, but is not related to positive relational outcomes (Hennig, 2019; Do Couto & Hennig, 2015). RO- has been linked to rejection sensitivity, which leads to suppression of one’s own needs due to fear of losing the relationship (Harper et al., 2006; Harper & Welsh, 2007). A general disposition of fearing rejection in relationships has been associated with greater use of avoidance sacrifice motives as a way to circumvent rejection, which in turn lead to poorer relationship outcomes (Impett, Gable & Peplau, 2005; Mattingly & Clark, 2012). This research suggests that RO- will be indirectly related to lower relationship quality due to greater avoidance motivated sacrifices.

As the midpoint on the continuum between RO+ and RO-, **RO+/-** represents a mix of risk and benefit, related to both positive relationship outcomes as well as negative personal outcomes (Hennig, 2019; Hennig & Walker, 2008). It is underlined by an attempt to promote relationship
harmony by placing the partner’s needs above the self (Jack & Dill, 1992). Although RO+/- has been widely linked with pro-relationship behaviours and positive global judgements of relationship quality (Ammanatullah, Morris & Curhan, 2008; Do Couto & Hennig, 2015), there is also some research to suggest that it may negatively impact the relationship by impeding an individual’s ability to meet their own needs in the relationship (Neff & Harter, 2002), and is associated with less satisfaction with specific components of the relationship, such as sexual satisfaction (Muise, Bergeron, Impett & Rosen, 2017). Considering these findings, RO+/- will likely be related to greater overall relationship quality due to the use of more approach motivated sacrifices.

Overview and Hypotheses of the Current Study

An initial cross-sectional design study was conducted in order to provide evidence for the hypothesized relational orientation model of sacrifice motives and relationship quality. This study specifically tested three hypotheses:

*H1*: At the adaptive end of the relational continuum, it is hypothesized that RO+ will be associated with positive relationship quality, mediated through approach sacrifice motives.

*H2*: In contrast, at the maladaptive end of the continuum it is hypothesized that RO- will be negatively associated with relationship quality, mediated through avoidance sacrifice motives.

*H3*: It is hypothesized that RO+/- (the mid-point) will be associated with greater relationship quality and will be mediated through greater approach sacrifice motives.

Methods

Participants and Procedure

A total of 455 (85.8% female) undergraduate students currently in a romantic relationship (relationship length: $M = 2.6$ years, $SD = 2.0$, Range = 0.5 - 15) participated in the study. Most
participants reported being in an opposite sex relationship, while twenty-nine participants reported being in a same sex relationship. On average, participants reported spending 35 hours with their relationship partners each week. Mean age of participants was 20.4 years ($SD = 1.13$).

The ethnic diversity of the sample was White/European (86.4%), Black/African/Caribbean (3.0%), Southeast Asian (0.9%), South Asian (1.8%), West Asian (1.6%), Arab (0.6%), Latin American (1.8%), and mixed ethnicity or “other” (3.9%). Participants were recruited from senior level psychology undergraduate courses at the University of Guelph and completed an online survey in exchange for course credit. The sample size provides sufficient power to detect small mediated effects (Fritz & MacKinnon, 2007). The following measures were completed (see Appendix A):

**Measures**

**Relationship quality.** Relationship quality was measured using the Commitment and Satisfaction subscales from the Investment Model Scale (Rusbult, Martz & Agnew, 1998). Sample items read: “I want our relationship to last for a very long time” (commitment subscale) and “I feel satisfied with our relationship” (satisfaction subscale). In line with Rusbult and colleagues’ (1998) recommendation, facet items of the satisfaction subscale were also administered to enhance measurement quality of the global items, however only global satisfaction items were utilized in the analyses. Participants rated items on a 9-point Likert scale ranging from 0 (do not agree at all) to 8 (completely agree). As both subscales were highly correlated ($r = .69$), a composite measure of relationship quality was created by summing items from both. Alpha reliability of the composite score in this sample was .93.

**Relational orientation style.** Research has demonstrated three distinct facets of a broader notion of relational orientation (Hennig & Walker, 2008). $RO+$ was measured using the
Relational-Interdependent Self-Construal scale (RISC; Cross et al., 2000). The 11-item scale assessed the extent to which individuals define themselves in terms of their interpersonal relationships (sample item: “My close relationships are an important reflection of who I am”). RO+/- and RO- relational orientations were assessed with the 2-Vector Unmitigated Communion Inventory (2-VCI; Hennig & Walker, 2008). The RO+/- subscale was composed of 11 items assessing a disposition to care for relationship partners (originally labelled, Submission-with-Connection; sample item: “For me to be happy, I need others to be happy”). The RO- subscale was composed of an additional 11 items (originally labelled, Submission-with-Connection; sample item: “If I can’t get along with somebody, I worry that something is wrong with me”). Silencing self reflects a focus on excessive social-evaluative concerns and hypervigilance regarding self-criticism. Participants responded using a 7-point Likert scale ranging from 1 (strongly disagree/not at all like me) to 7 (strongly agree/definitely yes). Alpha reliabilities in the current study for interdependent self, sacrificial self, and silencing self were good (α = .85, .90, and .89, respectively).

Sacrifice motivation. Participants were asked to "describe a situation in which you had the opportunity to do something that you did not particularly want to do, or give up something you did want to do, for the sake of your partner." Sacrifice motives for the event was assessed using the 10-item Sacrifice Motives Scale (Impett, Gable & Peplau, 2005). Participants rated the extent to which they sacrificed for approach (e.g. to make my partner happy) and avoidance motives (e.g. to avoid conflict in my relationship) on a 7-point Likert scale ranging from 1 (not at all important) to 7 (extremely important). Good internal reliability has been previously reported for both approach and avoidance motives (Impett, Gable & Peplau, 2005). Alpha reliability for approach and avoidance motives in the current sample was .65 and .80,
respectively. Results should be interpreted within the context of low internal reliability for the measure of approach motives, and thus may provide an underestimation of effects (Cortina, 1993).

**Analytic Strategy**

Prior to any quantitative analyses, a coding scheme was developed in order to examine the magnitude of reported sacrifices. Sacrifices were classified as small, medium, or large based on the personal consequences and amount of time committed to the sacrifice. Also, statistical assumptions relevant to general linear models were examined prior to analyses. Normality and homoscedasticity were assessed using the Shapiro-Wilk and Breusch-Pagan test, respectively. Gender differences on study variables were examined using a Multivariate Analysis of Variance (MANOVA). Bivariate correlations were then examined to determine the relationships among study variables.

To test the study hypotheses, mediational analyses were conducted using Hayes’ (2018; Model 4) PROCESS macro in SPSS. 95% bias-corrected bootstrapped confidence intervals were calculated for the indirect effects and are considered significant if the confidence interval does not include zero. Causal inferences were made according to updated methods (Hayes, 2009). Effect sizes for direct and indirect effects were calculated using partial correlations ($r_p$) and standardized indirect effect-size measure (Miocevic et al., 2018), respectively.

**Results**

The purpose of this study was to investigate the associations between relational orientation style, sacrifice motives, and relationship quality, with the expectation that relational orientation styles would be indirectly linked to relationship quality through sacrifice motives.
Prior to the main analyses the types of sacrifices participants reported, statistical assumptions, and descriptive statistics was examined.

**Types of Sacrifices**

In order to get an understanding of the types of sacrifices participants reported making for their partners, sacrifices were coded into a small, medium, or large category. The developed coding scheme and sample items are presented in Table 1. Two independent raters coded the sacrifices, with 83% agreement and a Krippendorff’s alpha of .82, indicating good interrater reliability (Hayes & Krippendorff, 2007). The two raters then discussed all sacrifices until the discrepancies were resolved. Only 62 of 436 sacrifices could not be categorized with the coding scheme due to insufficient information having been provided. Most participants (55%) described a medium level sacrifice, which included sacrificing time with family and friends in order to spend time with their partner (e.g., “I decided to go to his family events instead of mine”). Large sacrifices were reported by 17% of participants and included terminating other important relationships or sacrificing job or education goals for their partner (e.g., “transferred universities to be closer to my partner”). While 13% of participants reported small sacrifices such as driving their partner or making dinner (e.g., “decided to watch a romantic comedy instead of action movie”).

**Preliminary Analyses: Statistical Assumptions and Descriptive Statistics**

Descriptive statistics, mean, standard deviation, skew, and kurtosis of all the study variables are provided in Table 2. The Shapiro-Wilk test of normality (Villasenor Alva & Estrada, 2009) revealed that RO+, RO+/-, approach sacrifice motives, and relationship quality were all significantly negatively skewed. As a result, logarithmic transformed variables were used in all further analyses. The Breusch-Pagan test indicated that homoscedasticity was violated for all three linear models being tested in this study with RO+ ($\chi^2(3) = 36.48, p = .00$), RO- ($\chi^2(3)$
= 34.34, \( p = .00 \), and RO+/- (\( \chi^2(3) = 37.85, p = .00 \)) as the independent variables. Robust standard errors will be utilised to correct the heteroscedasticity bias.

A MANOVA was conducted to examine gender differences between female and male participants on the study variables. Due to the discrepant sample sizes between male and female participants (384 and 67, respectively), the assumption of equal variances was tested and satisfied using Levene’s test (Nordstokke & Zumbo, 2010). There was a statistically significant difference in study variables based on participant gender, \( F(6, 440) = 7.04, p = .00 \); Wilk’s \( \Lambda = .91 \). In examining the between-subject effects, a Bonferroni correction for inflated type I error was utilized, see Table 2 for means. Gender differences were present on some of the independent measures. Specifically, female participants endorsed higher levels of RO+ (\( F(1, 449) = 8.76, p = .00; n^2 = .15 \)) and RO+/- (\( F(1, 449) = 30.65, p = .00; n^2 = .53 \)), compared to male participants. No gender differences were observed regarding RO- (\( F(1, 449) = 1.14, p = .37 \)). There were no gender differences on approach sacrifice motives or avoidance sacrifice motives, \( F(1, 449) = 0.21, p = .64 \) and \( F(1, 449) = .736, p = .05 \), respectively. Gender differences were found for relationship quality. Female participants reported higher levels of relationship quality compared to male participants, \( F(1, 453) = 10.03, p = .02; n^2 = .17 \). Given the gender differences on relationship quality as the outcome variable, gender was controlled in subsequent analyses.

Simple zero-order correlations between study variables are presented in Table 3. All relational orientation styles were positively intercorrelated as expected. Conceived as on an adaptive-maladaptive continuum, RO+ (adaptive) and RO- (maladaptive) were weakly correlated, whereas both were correlated with RO+/- (the midpoint or blend). Also expected, RO+ and RO+/- were positively related to increased relationship quality, while RO- was not significantly related to relationship quality.
Approach and avoidance sacrifice motives were significantly correlated with each other. Subsequent analyses will include both approach and avoidance motives simultaneously to account for their intercorrelation and thus partial out the shared variance associated with a general tendency to sacrifice (regardless of motive) to their partners. Approach sacrifice motives were positively correlated with relationship quality, while avoidance sacrifice motives were not correlated with relationship quality.

Relational Orientation Model of Sacrifice Motives and Relationship Quality: Parallel Mediation Models

Relationships between relational orientation styles, sacrifice motives, and relationship quality were then examined within a parallel mediational model. All models included approach and avoidance sacrifice motives as mediators simultaneously and gender as a covariate. Unstandardized regression coefficients are presented in Figure 1.

**H1: RO+ will predict positive relationship quality, indirectly through approach sacrifice motives.** Examining simple zero-order correlations, approach motives positively predicted relationship quality, whereas avoidance motives did not predict relationship quality (RQ; see Table 3). Within the parallel mediation model (Figure 1), as expected, RO+ predicted approach ($r_p = .11$) and avoidance motives ($r_p = .10$). Both indirect pathways were significant. RO+ predicted greater approach motives which in turn predicted positive relationship quality ($\beta = .02$, 95% CI [.01 - .05]). Unexpectedly, a significant indirect effect was also found through avoidance motives. RO+ predicted greater avoidance motives which led to reduced relationship quality ($\beta = -.02$, 95% CI [-.04 - -.01]). After accounting for the indirect pathways, RO+ remained significantly positively related to relationship quality ($r_p = .29$). Results therefore supported a partial mediation model, that is, RO+ and indirect pathways through motives are
independent significant predictors of relationship quality. While both indirect pathways partially mediate the link between RO+ and relationship quality, the pathway through approach motives supports this relationship whereas the pathway through avoidance motives undermine this relationship.

**H2: RO- will indirectly predict negative relationship quality through avoidant sacrifice motives.** Examining simple zero-order correlations, RO- was significantly correlated with greater avoidance sacrifice motives but was not related to either approach sacrifice motives or relationship quality (see Table 3). Within the parallel mediation model (Figure 1), and as expected, RO- was negatively related to relationship quality ($r_p = .12$) and avoidance sacrifice motives ($r_p = .22$). The indirect effect through avoidance sacrifice motives was significant ($\beta = -.04$, 95% CI [-.07 – .02]), while the indirect pathway through approach motives was not significant (95% CI [-.02 – .04]). Therefore, the link between RO- and relationship quality is partially explained through the indirect pathway.

**H3: RO+/- will predict positive relationship quality, mediated through approach sacrifice motives.** In examining correlations (see Table 3), RO+/- was significantly related to greater relationship quality as expected but was not related to approach or avoidance sacrifice motives. In the parallel mediation model (Figure 1), RO+/- was also positively related to relationship quality ($r_p = .29$). The indirect effect between RO+/- and relationship quality through approach and avoidance sacrifice motives were not significant: (95% CI [-.01 – .04]) and (95% CI [-.04 – .01]), respectively. That is, motives did not mediate the relationship between RO+/- and relationship quality.
Discussion

There has been a longstanding interest in examining how individual differences affect behaviours in relationship and consequently the quality of those close relationships. The current study extends previous research on relational orientation styles and relationship outcomes since no research to date has examined how relational orientation style affect behaviours in romantic relationships. Consistent with previous research, it was found that approach motivated sacrifices predicted greater relationship quality while avoidance motivated sacrifices predicted lower relationship quality (Impett, Gable & Peplau, 2005; Impett & Gordon, 2010). As a new contribution to this line of research, this study specifically examined the impact of relational orientation on sacrifice motives. Overall, the results of Study 1 provided support for the differential relations between relationship orientation, sacrifice motives, and consequently relationship outcomes.

Interdependent Self (RO+) and Sacrifice Motives

As expected, RO+, as the adaptive form of relational orientation, was related to greater relationship quality through the use of greater approach sacrifice motives. These findings are consistent with prior research which has shown the adaptive properties of RO+, such as greater use of pro-relationship behaviours (Morry & Kito, 2009), greater social competence skills (Do Couto & Hennig, 2015), and more positive relationship evaluations (Hennig & Walker, 2008). Somewhat unexpectedly, RO+ was also found to be related to greater use of avoidance sacrifice motives which led to reduced relationship quality. Despite the negative impact of avoidance sacrifice motives on relationship quality, individuals higher in RO+ continued to experience positive relationship quality. This finding, although unexpected, is consistent with regulatory focus theory which posits that approach and avoidance motives are both used in combination to
achieve a desired goal (e.g., relationship quality; Higgins, 1997; Winterheld & Simpson, 2011). Therefore, although avoidance sacrifice motives have a generally negative impact on relationship quality, a combination of approach and avoidance motives does not negatively impact relationship quality. In fact, a previous study noted that individuals with a greater communal orientation felt authentic using both approach and avoidance motivated sacrifices in their romantic relationships (Impett, Le et al., 2013). These results suggest that individuals with greater RO+ sacrificed in order to both increase positive, as well as, decrease negative outcomes.

**Silencing Self (RO-) and Sacrifice Motives**

RO- as the maladaptive form of relational orientation was negatively related to relationship quality through greater use of avoidance sacrifice motives. That is, individuals with greater RO- tended to sacrifice as a way to avoid negative outcomes with their relationship partners, which in turn resulted in less relationship quality. These findings are consistent with previous research in which RO- was related to a fear of rejection by a partner (Harper, Dickson & Welsh, 2006; Harper & Welsh, 2007). This general interpersonal anxiety and belief likely heightens the avoidance system and impacts sacrifice motives. Also, as has been previously documented, avoidance sacrifice motives lead to poorer relationship quality (Impett et al., 2005) and may be one mechanism which explains RO-‘s link with negative relationship outcomes (Hennig, 2019).

**Sacrificial Self (RO+/-) and Sacrifice Motives**

RO+/- as the 'mixed' risk-benefit relational orientation, was directly related to greater relationship quality. These results were consistent with previous research in which RO+/- was related to positive relational outcomes (e.g. social competence skills, relationship satisfaction; Do Couto & Hennig, 2015; Hennig, 2019). However, contrary to expectations it was not significantly related to either approach or avoidance motivated sacrifices. This lack of
associations with approach and avoidance motives was previously noted in regard to sexual motives (Hogue et al., 2019). Hogue and colleagues (2019) theorised that this may be due to individuals higher in RO+/− acting in accordance with self-focused versus partner-focused motives, as they generally aim to care for their partners as way to feel self-assured (Helgeson & Fritz, 2000). Given that the measures of approach and avoidance motives did not distinguish between self- and partner-focused motives, this may have also contributed to the unclear findings in the current study.

**Strengths and Limitations**

This study is among the first to report on relational orientation, sacrifice motives, and relationship quality. It provides novel information about how relational orientation differentially affects relationship behaviour motivations and consequently the overall quality of the relationship. Although this study provided support for links between relational orientation, sacrifice motives, and relationship quality, it had a few limitations.

First, the current study captured mostly medium level sacrifices. Although small sacrifices are likely more common in relationships, participants were allowed to identify any sacrifice throughout the course of their relationship. Given that medium level sacrifices involved giving up time spent on another important relationship or activity, they likely also involved forethought, which contributed to the sacrifice being easily recalled. As a result, the analyses and results are based on sacrifices that incur a significant personal cost and the generalizability of the findings may be limited by the magnitude of sacrifices.

Another important limitation is the cross-sectional design, which required participants to provide retrospective reports of sacrifices that they had made for their partner over the course of their relationship. Although some research has shown that not all retrospective reports are
inaccurate (Oishi & Sullivan, 2006), the effect of retrospective recall bias on reports of relationship events has been well documented (Mehl, Connor & Csikszentmihalyi, 2011). Specifically, retrospective reports tend to be influenced by current mood states, the most salient experiences, and beliefs about the self (Bolger, Davis & Rafaeli, 2003; Halford, Keefer & Osgarby, 2002). As a result, future studies would benefit from a daily experience study of long-term romantic relationships. This would allow participants to report on specific daily sacrifices and it would allow for the examination of the impact of sacrifice motives on relationships over time.

Finally, the fact that only one member of the romantic couple was examined in the current study is also an important limitation. This method of investigation, although common, excludes an examination of the effect that relationship partners have on one another and ignores the inherently interdependent nature of relationships (Kenny, Kashy & Cook, 2006). Future studies should include a dyadic experimental design in order to address these gaps. Although the current study is a good starting point for examining the relational orientation model of sacrifice motives and relationship quality, addressing these limitations will allow for a more naturalistic examination of relationships.
Chapter 3: Study 2

In Study 1 the effect of relational orientation facets and sacrifice motives on relationship quality were examined in a sample of individuals currently in romantic relationships. Research has confirmed that the three styles of relational orientation can be understood as existing on an adaptive-maladaptive continuum. On the adaptive end is interdependent self (RO+), which is related to positive relationship outcomes (Hennig & Walker, 2008). On the maladaptive end of the continuum is silencing self (RO-) which is associated with a variety of anxiety and avoidance concerns. Sacrificial self (RO+/-) sits in the middle of the continuum with a blend of adaptive and maladaptive associated outcomes (Hennig & Walker, 2008). Consistent with previous research, the more adaptive styles, RO+ and RO+/-, were positively related to relationship quality. Whereas RO- was negatively related to relationship quality. In examining motives for sacrifice, approach motives were positively related to relationship quality, whereas avoidance motives were negatively related to relationship quality.

Study 1 found some support for the hypothesized relational orientation model of sacrifice motives and relationship quality. RO+’s link with greater relationship quality was partially mediated by approach sacrifice motives and was also partially suppressed by avoidance sacrifice motives. RO-’s negative link with relationship quality was also partially mediated through greater use of avoidance motives. RO+/- was not indirectly related to relationship quality through approach or avoidance sacrifice motives.

The purpose of Study 2 was to extend the ecological validity of the previous findings by dyadically investigating the day-to-day experiences of partners in naturally formed long-term romantic relationships. This approach allowed for the examination of how relational orientation and sacrifice motives impact the relationship quality experienced by both partners through the
dyadic relational orientation model of sacrifice motives and relationship quality (Figure 2). In order to further examine dyadic effects, perceptions of partners’ sacrifice motives and the effects of perceptions on relationship quality.

**A Dyadic Examination of Relationships**

Due to the interdependent nature of close relationships, an individual’s cognitions, emotions, and behaviours will affect his or her partner’s cognitions, emotions, and behaviours (Kenny, Kashy & Cook, 2006). This notion of mutual influence is an essential feature of closeness in relationships (Kelley & Thibaut, 1978) and viewed as integral to the longevity of relationships (Gottman, Coan, Carrer & Swanson, 1998). Most major theories of romantic relationships recognise the importance of interdependence, including theories of equity (Messick & Crook, 1983), commitment (Rusbult, 1980), intimacy (Reis & Shaver, 1988), and attachment (Bowlby, 1969). The impact of an individual on their partner has been widely documented. For example, relationship partners of individuals who are content with the division of household labour (Mikula, Riederer & Bodi, 2012), who engage in sex for approach motives (Muise, Impett & Desmarais, 2013), and who have greater empathic accuracy (Kilpatrick, Bissonnette & Rusbult, 2002) experience greater satisfaction in their relationship.

Yet, despite the interdependent nature of relationship behaviours, a large portion of previous relationship research has been conducted from an individual lens, primarily due to difficulties statistically modeling these effects (Kenny, Kashy, & Cook, 2006). As a result, Kenny and colleagues (2006), developed a dyadic model (Actor Partner Interdependence Model) to allow for the operationalization and examination of interdependence in relationships. According to this model, an individual’s behaviour will impact their own experience of the relationship (*actor effect*), as well as their partner’s experience of the relationship (*partner effect*; Kenny, et al., 2006). A partner’s cognition, emotions, and behaviours may impact each member
of the dyad differently. For example, an individual’s decision to watch their partner’s preferred movie may lead them to evaluate their relationship negatively due to apparent conflicting interests (actor effect), while their partner may evaluate their relationship positively by noting their partner’s commitment (partner effect). Dyadic measurement, which provides information about both partner’s evaluation of their relationship, is integral when studying romantic relationships in order to account for this interdependence.

The role of an individual’s relational orientation style on their partner’s relationship quality has not been extensively studied. To date, only one study has dyadically examined relational orientation styles and relationship quality (Do Couto & Hennig, 2015). The direct actor effects were consistent with the findings of Study 1 and these relationships were mirrored in the partner effects. An actor’s RO+ and RO+/− led their partner to report greater satisfaction while RO- was not related to their partner’s satisfaction. It is important to note that actor effects were significantly stronger than partner effects, meaning that RO+ and RO+/− had a greater impact on one’s own satisfaction than on a partner’s satisfaction. However, this study was completed during the initial stage of friendship formation between previously unacquainted females and no other study has examined the link between relational orientation and relationship quality in long-term naturally formed romantic relationships. Since it is believed that relationship interdependence is built over time between relationship partners (Duck, 1988), examining these associations in long-term relationships is important to get a realistic understanding of these effects in real romantic relationships.

The similarity of actor and partner effects has also been documented within research examining general relationship motives. Greater approach relationship goals (e.g., to deepen the relationship) are associated with greater relationship satisfaction for both relationship partners.
(Elliot, Gable & Mapes, 2006; Impett et al., 2010). This has been explained by the tendency of individuals with greater approach motives to seek out positive experiences for themselves and their partners, which likely positively impacts the relationship (Gable et al., 2000; Gable & Impett, 2012). Also, greater avoidance relationship goals (e.g., to avoid being betrayed in the relationship) are associated with decreased relationship satisfaction for both partners (Elliot et al., 2006; Impett et al., 2010). Investigators have argued this is related to elevated negative responses to life events that also amplify negative experiences for relationship partners (Gable et al., 2010; Gable & Impett, 2012; Kuster et al., 2015).

Relevant to the current program of research, sacrifice motives have more complex effects in relationships since a sacrifice, regardless of motive, always materialistically benefits one partner. In regard to sacrificing for approach motives (e.g., to make partner happy), dyadic analysis has shown that both relationship partners, the sacrificer and the sacrifice recipient (actor and partner effect), experience improved relationship satisfaction (Cooper et al., 2017; Impett et al., 2005; Impett et al., 2010; Impett, Gere et al., 2013). However, sacrificing for avoidance motives (e.g., to avoid conflict) leads to a decrease in relationship satisfaction and an increase in perceived conflict for the sacrificer (actor effect). Furthermore, although the sacrifice recipient (partner effect) does not report any immediate negative outcomes (Impett, Gere et al., 2013), they were negatively impacted over time (1 to 3 months later), as partners reported lowered relationship satisfaction a (Impett et al., 2005; Impett, Gere et al., 2013) and greater relationship dissolution (Impett et al., 2005). This pattern of results suggests that sacrificing to avoid negative relationship outcomes may work momentarily to avoid conflict, however, lingering negative emotions by the sacrificer, such as resentment, may erode the relationship over time with continued use of avoidance motivated sacrifices.
These results suggest the importance of dyadic measurement to obtain a true understanding of the impact of relational orientation and sacrifice motives on both partners of the relationship. The hypothesized dyadic relational orientation model of sacrifice motives and relationship quality proposed for this study is presented in Figure 2. As can be seen, it is expected that relational orientation and sacrifice motives will affect both the actor and partner’s relationship quality.

**Accuracy and Bias in Perceptions of Partner’s Sacrifice Motives**

As was discussed in the previous section, the interdependent nature of close relationships means that an individual’s experience in a relationship is not simply the result of their own traits and behaviours but of their partner’s traits and behaviours as well (Kenny, et al., 2006). The link between a partner’s behaviour and an individual’s relationship quality can occur directly and indirectly. For example, a direct effect, as discussed in the previous section, would include an individual choosing to watch a movie preferred by their partner and this resulting in their partner feeling happy because they were able to engage in their preferred activity. Whereas an indirect effect would occur through a person’s perceptions of his or her partner’s behaviour, for instance, the relationship partner perceives their partner’s movie choice as insignificant due to the lack of other high value alternate movies at the time and does not experience a change in emotion. In fact, some research suggests that the perception of a partner's behavior is more important than the partner’s actual behavior in predicting self-reported relationship quality (Do Couto & Hennig, 2015; Reis & Shaver, 1988).

Investigators have found that perceiving a partner’s positive relationship behaviours (e.g., demonstrated physical affection, expressed verbal praise) leads to greater relationship commitment and satisfaction, whereas perceiving negative relationship behaviours (e.g., expressed criticism, inattentive towards partner) leads to less relationship commitment and
satisfaction (Gable, Reis & Downey, 2003; Murray et al., 2011). The tracking of partner
behaviours is evolutionarily beneficial, since commitment to a relationship involves the
investment of resources (e.g., time, money) and any indication that a relationship partner is not
as committed to the relationship (e.g., not investing resources) would warrant a decrease in
commitment and emotional detachment from the partner (Xue & Silk, 2012). Research has also
found that mental representations of relationships shape partners’ expectations of each other and
therefore affects perceptions of positive and negative relationship behaviours (Mikulincer &
Horesh, 1999; Mikulincer, Shaver & Slav, 2006). For example, individuals who expect to be
rejected by their partner are hypervigilant to their partner’s negative behaviours and are likely to
perceive their partner as rejecting (Kivlighan & Marmarosh, 2016; Overall et al., 2016). This
would suggest that relational orientation styles may also impact perceptions of their partner’s
relationship behaviours. Specifically, that RO+ would lead people to be more highly attuned to
positive relationship behaviours, whereas RO- would lead to greater vigilance for negative
relationship behaviours.

Overall, individuals’ perceptions of their romantic partners’ traits, behaviours, and
attitudes tends to be moderately accurate (Fletcher & Kerr, 2010). Accuracy refers to the notion
that perceptions tend to be closely linked to partners’ actual reports, whereas inaccuracy is when
perceptions are not closely linked to partner’s actual reports. Inaccuracy includes both random
error as well as bias, which is a consistent set of beliefs and expectations about a partner’s
behaviours and motives (for a fuller explanation see West & Kenny, 2011). Although accuracy
of perception is important in order to promote understanding within relationships, inaccuracy has
also been shown to benefit the relationship when it is comprised of a systematic bias (Conley,
Roesch, Peplau & Gold, 2009; Visserman et al., 2018). For example, the similarity bias which
leads individuals to project their own experiences and emotions onto their partner, makes partners feel connected by reinforcing beliefs that relationship partners are compatible (Clark, Von Culin, Clark-Pulner & Lemay, 2016; Gagne & Lydon, 2004; Murray et al., 2002). Therefore, it is important to examine the accuracy and bias that drives perceptions of partners’ behaviours.

In fact, many researchers have documented that accuracy and bias of perceptions can coexist (Fletcher & Kerr, 2010; Gagne & Lydon, 2004; Luo & Snider, 2009). An example provided by Fletcher (2002) may help to elucidate this idea. Both partners of a couple (Mary and John) rate some of John’s characteristics (intelligence, warmth, attractiveness, ambition) on a 7-point likert scale. Mary’s ratings are 4, 5, 6, 7 while John’s self-ratings are 3, 4, 5, 6. Mary’s perceptions are positively biased, as her ratings were consistently higher than John’s, however, her ratings are also accurate because they do a good job at tracking John’s self-ratings. In summary, accuracy and bias are considered to function independently and can operate simultaneously. Researchers have examined the role of accuracy and bias on perceptions of a variety of relationship behaviours, such as a partner’s emotions (Rauers, Blanke & Riediger, 2013), supportive behaviours (Bar-Kalifa, Rafaeli & Sened, 2016), warmth in conflict discussions (Overall, Fletcher & Kenny, 2012), daily hostile behaviours (Overall, Fletcher, Simpson & Fillo, 2015), and sexual desire (Muise, Stanton, Kim & Impett, 2016). All of these studies demonstrated the differential role of accuracy and bias in perceptions.

As a result, West and Kenny’s (2011) statistical truth and bias model will be used in the current study which allows for accuracy and bias to coexist. This model allows for the simultaneous estimation of four effects: directional bias, true accuracy, projected bias, and projected accuracy. Directional bias captures consistent over- or underestimation of a partner’s
behaviour (e.g., a partner consistently does not notice sacrifices made for them). True accuracy represents the extent to which perceptions of a partner’s behaviour is accurate and driven by the partner’s actual behaviour (e.g., a partner notices a sacrifice that their partner also reported making). Projected bias captures the extent to which perceptions of a partner’s behaviour is inaccurate and driven by the projection of one’s own behaviour (e.g., a partner is more likely to indicate that their partner sacrifices for them on days that they also sacrificed). However, since relationship partners tend to be similar in a broad range of characteristics (Youyou, Stillwell, Schwartz & Kosinski, 2017), the truth and bias model also allows for the examination of projected accuracy. This pathway accounts for when partners are actually similar and thus a partner’s projection of self leads to accurate perceptions (e.g., a partner is more likely to notice a sacrifice their partner made on a day when they themselves sacrificed because their partners were more likely to sacrifice on those days). See Figure 3 for a visual representation of the model.

Only a few studies have examined perceptions of sacrifice. What is known about perceptions of partner’s sacrifice behaviours is that perceiving frequent sacrifices from one’s partner is related to greater feelings of commitment (Joel, Gordon, Impett, MacDonald & Keltner, 2013). However, only half of reported sacrifices are typically noticed by their partners (Visserman et al., 2018). Both the perceivers and their partners reported lowered relationship satisfaction when the sacrifice was not perceived. These associations have been shown to be mediated by feelings of gratitude, so when a costly sacrifice is not perceived a partner does not have the opportunity to feel and display gratitude, which results in the sacrificer feeling undervalued (Visserman et al., 2018; Young & Curran, 2016).

In terms of sacrifice motives, a recent study found that people generally underestimate their partner’s approach and avoidance sacrifice motives. (LaBuda, 2019). It was also found that
perceptions for avoidance sacrifice motives, but not approach motives, were driven by a partner’s actual avoidance motives. This is important because perceptions of sacrifice motives have been shown to impact various relational and individual outcomes. In fact, perceiving greater approach motivated sacrifices was related to greater relationship satisfaction, gratitude and personal well-being (Impett et al. 2005; Impett, Gere, Kogan, Gordon & Keltner, 2013), while perceiving avoidance motivated sacrifices led to less gratitude, relationship satisfaction, and personal well-being (Impett et al. 2005; Visserman, Righetti, Impett, Keltner & Van Lange, 2017). Since there has been limited research on perceptions of sacrifice motives, there remains a need to examine how accuracy and bias simultaneously affect perceptions of sacrifice motives and whether accuracy leads to better or worse relationship quality for both partners.

**Overview and Aims of the Current Study**

The aim of the current study is twofold, to extend the findings of Study 1 using a daily dyadic design and to examine the perceptions of partner’s sacrifice motives. By examining the relational orientation model of sacrifice motives and relationship quality using dyadic analysis, I intend to extend the ecological validity of the model and also better understand how relationship partners are impacted. Given the significant role that perceptions of behaviours play in affecting relationship quality, examining accuracy and bias of perceptions and their role on each partner’s evaluation of the relationship was also important.

**Aim 1: To examine the dyadic relational orientation model of sacrifice motives and relationship quality.** It is expected that an individual’s relational orientation style will be differentially related to their own relationship quality indirectly through approach and avoidance sacrifice motives (actor effect), as observed in Study 1 (see Figure 2). More specifically and regarding actor effects, RO+ is expected to demonstrate a positive actor effect, RO- a negative
actor effect, and RO+/− would demonstrate more of a mixed risk-benefit effect. Regarding partner effects, a similar, though much weaker, pattern of relations is expected.

**Aim 2: To examine accuracy and bias in perceptions of partner’s sacrifice behaviours and its impact on relationship quality.** The effects of perceiving sacrifice behaviours on one’s relationship quality will first be examined. Second, the role of accuracy and bias on perceptions of partner sacrifice will be investigated. Specifically, to examine the extent to which true accuracy and projected accuracy affect these perceptions and whether relational orientation style moderate those relationships. Finally, the impact of accurate and biased sacrifice perceptions on a partner’s relationship quality will also be explored.

**Methods**

**Participants**

A total of 116 dating couples were recruited both through an upper year undergraduate course at the University of Guelph, as well as from community social media groups (e.g., Facebook). To be eligible for the current study, couples had to be in an exclusive romantic relationship for a minimum duration of 3 months and have face-to-face contact at least 5 days a week. These selection criteria were chosen in order to ensure partners had established a level of interdependence in accordance with other dyadic studies (Totenhagen, Curran, Serido, & Butler, 2013) and would have daily opportunities to sacrifice. Participants were compensated with either course credit or were entered into a raffle to win 1 of 3 $100 gift cards.

Participants ranged in age from 20 to 31 years of age ($M = 22.1$ years, $SD = 2.2$) and self-identified as White/European (72.7%), Black/African/Caribbean (1.7%), Southeast Asian (3.4%), South Asian (6.3%), West Asian (1.1%), Arab (2.3%), Latin American (2.8%), and mixed ethnicity or “other” (9.1). Participating couples included opposite sex (95.5%) and same
sex (4.5%) couples, who were dating exclusively (67.1%), living together (26.1%), and married (6.8%). The average reported relationship length was 3 years ($M = 34.5$ months, $SD = 27.1$ months), and partners on average reported spending 49 hours together weekly ($SD = 36.5$ hours).

**Procedure**

At Time 1, participants reported their relational orientation style as well as demographic and relationship information. The remaining 6 days, participants completed daily logs of their relationship quality, sacrifice motives, and perceptions of their partners’ sacrifice motives.

Both members of the couple were instructed to complete brief online surveys for 7 consecutive nights, with an average length of 15 minutes (see Appendix B and Appendix C). Participants were instructed to complete the daily logs separately and to not share their answers with their partner. In order to maximize compliance, participants received daily reminder emails. Only daily logs completed that evening or the morning after (before 12:00pm) were treated as valid, time and date stamps were used to remove late and duplicate entries. Ten couples (8.6%) had less than 3 days of matched valid daily logs, and twenty couples (17.2%) did not report any sacrifice behaviours during the duration of the study, therefore their data were not included in the current analyses. The final sample consisted of 84 couples ($N = 168$ participants) who completed a total of 1,022 daily logs ($M = 6.2$ logs per person, $SD = 1.2$, Range = 3-7 logs).

**Time 1 Measures**

**Relational orientation.** Relational orientation was assessed using the same measures as in Study 1. The Relational-Interdependent Self-Construal scale (RISC; Cross et al., 2000) assessed RO+, and the 2-Vector Unmitigated Communion Inventory (2-VCI; Hennig & Walker, 2008) assessed RO+/- and RO-. Alpha reliabilities in the current study for RO+, RO+/-, and RO- were good ($\alpha = .86$, .88, and .83, respectively).
Demographic & relationship information. Participants self-reported gender, age, and ethnicity. Dating relationship information, such as duration of relationship and time spent together, were collected from both relationship partners.

The following daily diary measures were also completed during Time 1.

Daily Diary Measures

Daily relationship quality. Following Impett and colleagues (2013), positive relationship quality assessed participants’ experience of satisfaction, closeness and love. Negative relationship quality assessed participants’ experience of conflict, feelings of disappointment with partner, rejection by partner, and taken for granted by partner. Participants rated all 7 items on a 7-point Likert scale ranging from 1 (not at all/none) to 7 (very much/a lot). The negative items were reverse coded and combined to create a composite score of relationship quality summing across items for the (up to) 7 days of diary data collection portion. The reliability alpha coefficient of the averaged items over the 7-day study was .85.

Daily sacrifice behavior (frequency). Participants were asked whether they had made a sacrifice for their partner. “Today, did you do anything that you did not particularly want to do for your partner? Or, did you give up something that you did want to do for the sake of your partner?” (Impett et al., 2005; Kogan et al., 2010). If participants indicated that they sacrificed for their partner that day, they were also asked to report how many sacrifices they made and to provide a brief description of one sacrifice.

Daily sacrifice motivation. Participants who reported making a sacrifice for their partner were asked to complete the 10-item Sacrifice Motives Scale (Impett et al., 2005) from Study 1. The reliability coefficient of the average ratings over the 7-day study period was .67 for approach motives and .83 for avoidance motives. Results involving approach motives may be an underestimation given the low internal reliability (Cortina, 1993).
Perception of partner’s sacrifice behaviour (frequency). Participants were asked whether their partner sacrificed for them. “Today, did your partner do anything that he/she did not particularly want to do, for you? Or did they give up something they did want for you?” (Impett et al., 2005). If participants indicated that their partners had sacrificed for them, they were asked to report how many sacrifices their partner made and to provide a brief description of one of their partner’s sacrifice.

Perception of partner’s sacrifice motivation. Participants who indicated that their partner sacrificed for them that day were requested to complete the 10-item Sacrifice Motives Scale (Impett et al., 2005). Original items were reworded to reference the partner’s motives and participants were asked to rate the importance of each of the reasons in influencing their partner’s decision to sacrifice. The reliability coefficients of the average ratings over the 7-day study period was .66 for perception of approach motives and .84 for perception of avoidance motives. Results involving perceived approach motives may be an underestimate given the low internal reliability (Cortina, 1993).

Analytic Strategy

Prior to all quantitative analyses, the daily sacrifices reported and perceived by participants were classified using the same coding scheme as in Study 1. Statistical assumptions of dyadic data, interdependence and distinguishability, were then examined. Pairwise intraclass correlations were utilized to confirm interdependence between partners (Kenny, Kashy & Cook, 2006). A recommendation from Kenny, Kashy & Cook (2006) that tests of nonindependence should adopt a liberal test value for alpha ($p < .20$) and require at least 25 couples for adequate power was followed. The statistical distinguishability of theoretically distinguishable opposite sex couples was estimated using DINGY (Kenny, 2018). DINGY is a web-based application that
estimates several models in which variances, correlations, and means are constrained to be equal between different gendered partners, in order to determine the best fit for the data. Power analyses were also conducted to determine the best procedure for addressing the aims of the current study.

Possible gender differences among study variables was tested using paired sample t-test. Only opposite sex couples were included in this analysis and a Bonferroni correction was utilized to account for inflated type 1 error. Given that the current study included couples who were dating, living together, and married, a Multivariate Analysis of Variance (MANOVA) was used to examine differences in study variables based on relationship status. A linear regression was also used to examine differences between couples who spend more or less time together. Finally, differences among couples based on sacrifice frequency was also examined. A dummy-coded variable was created to distinguish between couples in which both partners reported sacrificing and couples where only one partner sacrificed. A linear regression with the dummy-coded variable was then conducted.

**Aim 1: To examine the dyadic relational orientation model of sacrifice motives and relationship quality.** In order to examine the relational orientation model of sacrifice motives and relationship quality within the dyadic sample, the Actor Partner Interdependence Model was utilized (APIM; Kenny, Kashy & Cook, 2006). The APIM model accounts for the interdependence of data between relationship partners and simultaneously models actor and partner effects. The data was analyzed with multilevel modeling using mixed models in SPSS 25. The effect of a partner’s relational orientation style on their own outcome variables (actor effect) and its effect on their partner’s reported outcome variables (partner effect) were both included in the model (see Figure 2). The Monte Carlo Method of Assessing Mediation (MCMAM; Selig &
Preacher, 2008) with 20,000 resamples and 95% CIs was utilized to test the significance of the indirect effects. Effect sizes were computed using partial correlations \((r_p)\). In order to account for the relationship between approach and avoidance motives, they were included in the models simultaneously.

**Aim 2: To examine accuracy and bias in perceptions of partner’s sacrifice motives and its impact on relationship quality.** First, multilevel modeling, which accounts for the interdependence of romantic couples, was applied to examine the effects of relational orientation style on perceptions of sacrifice behaviours and motives, and how those perceptions affect a participant’s relationship quality.

Secondly, the role of accuracy and similarity bias on perceptions of partners’ sacrifice motives were examined using the Truth and Bias model (see Figure 3; West & Kenny, 2011). The perceiver’s judgements of their partner’s sacrifice motives (outcome variable) were centered on their partner’s actual reported sacrifice motives. This allowed for the measurement of the intercept which represents the difference between the average of the partner’s reported sacrifice motives and the average of the perceiver’s judgment of their partner’s motives, and tests whether the perceiver’s judgement significantly differed from their partner’s actual motives and the direction of the bias (directional bias). **True accuracy** (the extent to which perceivers draw on their partner’s actual motives in their judgements) and **projected bias** (the extent to which perceivers project their own motives onto their partners in their judgements) were measured by comparing a perceiver’s judgement of sacrifice motives with their partner’s actual sacrifice motives and their own sacrifice motives, respectively. In addition to accurately discerning a partner’s motives, a perceiver’s judgements may also be accurate as a result of projection bias if partners are truly similar (termed **projected accuracy**) in which case accuracy of perceptions is
an artifact. Monte Carlo simulations were utilized to estimate the indirect effect of projected accuracy (Bauer, Preacher & Gil, 2006). Relational orientation styles were examined as potential moderators in the truth and bias model and were grand mean centered.

Finally, multilevel polynomial regression with response surface analysis (Shanock, Baran, Gentry, Pattison & Heggestad, 2010) was utilized to examine the consequences of accurate (agreement) and biased (disagreement) perceptions on relationship quality. Note that in these analyses the term "accuracy" does not assume the source of accuracy as being derived from truth (i.e., true accuracy) or from projection (i.e., projected accuracy). Following Shanock and colleagues’ (2010) guidelines, predictor variables were centered around the midpoint of the scale. Squared versions and product terms of the centered predictors were also simultaneously entered as predictors. The results of these analyses were then examined using surface test values ($a_1$, $a_2$, $a_3$ and $a_4$). Specifically, the direction and significance of the $a_1$ values (the line of perfect agreement) were examined to understand the consequences of agreement (accuracy). The direction and significance of $a_3$ values (the line of perfect disagreement) were examined to understand the consequences of disagreement (inaccuracy).

**Results**

The purpose of the current study was two-fold. First, to dyadically examine the relational orientation model of sacrifice motives and relationship quality within a daily log design. Second and extending the dyadic model, to examine the role of *accuracy* (do partners perceive one another accurately?) and similarity *bias* (are their perceptions coloured by their own behaviours?) in perception of partners’ sacrifice motives.
Preliminary Analyses

Types of Sacrifices Reported and Perceived. Two independent raters used the coding scheme developed in Study 1 to categorize daily sacrifices participants reported and perceived their partners making. All discrepant ratings were then discussed until resolved. Initial independent ratings of sacrifices reported and perceived had an 83% and 84% agreement, respectively. Assessed by Kirppendorff’s alpha, interrater reliability was relatively low for both (α = .60 and .62, respectively; Hayes & Krippendorff, 2007). The discrepancy between percentage agreement and Kirppendorff’s alpha is likely the result of the Kappa paradox (Feinstein & Cicchetti, 1990), where despite the high percentage of inter-observer agreement the corresponding value of Kappa is low because of a skew in the data being coded given the high percentage of small sacrifices.

Unlike Study 1, the vast majority of participants reported making small daily sacrifices (67%; e.g., “slept in with them”). Few participants reported making medium (25%; e.g., “edited her paper even though I had a paper due too”) or large sacrifices (4%; “I broke my fast for him”). Similarly, the large majority of participants perceived their partners making small daily sacrifices for them (72%; e.g., “she tidied the apartment”), while medium (23%; e.g., “stayed up all night taking care of the baby so I could sleep”) and large sacrifices were much less frequent (2%; e.g., “he did not smoke cigarettes”). A few sacrifices were unable to be coded due to insufficient information provided, 5 of 225 sacrifices made and 7 of 212 perceived sacrifices.

Statistical Assumptions. Given the dyadic nature of the data, assumptions of nonindependence and distinguishability were tested in order to ensure the data was appropriate for dyadic analyses.
**Nonindependence.** The dyadic nature of the study is established on the notion that partners in a couple are interdependent with one another and thus, their behaviour is not independent. Pairwise intraclass correlations were calculated for all study variables (Kenny, Kashy & Cook, 2006). The analysis revealed significant associations between parallel measures for each member of the dyad for sacrifice frequency ($r = .40, p < .00$), approach sacrifice motives ($r = .22, p < .20$), avoidance sacrifice motives ($r = .16, p < .20$), and relationship quality ($r = .60, p < .01$). Since most study outcome variables demonstrated nonindependence, the unit of analysis will be at the dyadic level.

**Distinguishability.** Another important consideration when examining dyadic data is whether or not partners are distinguishable from one another as this will affect subsequent analyses (Kenny, Kashy & Cook, 2006). The current sample includes opposite sex couples which are theoretically distinguishable by gender, and same sex couples that have no meaningful distinction between partners. Distinguishability was tested using DINGY and the results revealed that the model that best fit the data contained equal variances and correlations, but unequal means ($\chi^2(57) = 76.71, p = .13$, RMSEA = .03). This suggests it is not statistically necessary to treat opposite sex couples as distinguishable. Therefore, further analyses treated all couples (opposite and same sex couples) as indistinguishable and partners were randomly assigned to partner 1 and partner 2.

**Preliminary Dyadic Analyses.** Analysis of the daily dyadic data was to be examined using the Over-Time Standard Actor-Partner Interdependence Model (Kenny, Kashy & Cook, 2006). However, the data on sacrifice motives was contingent on sacrifice frequency and given the low frequency of daily sacrifices over the 7-day study (1.19 average reported sacrifices, see more below) there was a large amount of missing sacrifice motives data. A full data set is present
for the relational orientation and relationship quality variables. A Monte Carlo simulation power analysis was conducted in Mplus 7.3 (Muthen & Muthen, 2002), which indicated that the hypothesized daily dyadic mediation model (one relational orientation predictor, 4 actor mediators, 4 partner mediators, and 1 outcome variable) with medium effect sizes, would produce a poor model fit ($\chi^2(32) = 245.801, p < .00$). As a result, a modification in the original analytic strategy was required.

In place of using separate daily scores in the analyses, daily scores were collapsed across the 7-day study to create an average score of approach and avoidance sacrifice motives, perceptions of approach and avoidance sacrifice motives, and relationship quality for each participant. Given the cross-sectional nature of the data, another power analysis was used to assess the current power. APIMPowerR (Ackerman & Kenny, 2016), a power analysis program designed for Actor-Partner Interdependence Models (APIM) with indistinguishable dyads, indicates that the current study is appropriately powered to detect large effect sizes, but underpowered to detect small or medium effect sizes. Results should be interpreted with caution, given that the study is underpowered.

Descriptive Statistics

Gender differences. Paired sample t-tests with a Bonferroni correction was used to examine gender differences. As in Study 1, female participants endorsed higher levels of RO+ ($t (83) = 3.69, p = .00; d = .38$) and RO+- ($t (83) = 3.20, p = .00; d = .38$), compared to male participants. No gender differences were observed regarding RO-, $t (83) = .96, p = .35$. With regard to sacrifice frequency, there were no gender differences in the number of days that sacrifices were reported ($t (83) = -1.68, p = .10$), but women perceived their partners sacrificing more often compared to men, $t (83) = 3.10, p = .00; d = .29$. In terms of sacrifice motives, no
gender differences were found among approach or avoidance sacrifice motives \((t (33) = -1.07, p = .29\) and \(t (33) = -1.45, p = .16\), respectively), and among perception of partners’ approach or avoidance sacrifice motives \((t (38) = 1.67, p = .10\) and \(t (38) = 1.11, p = .27\), respectively).

Relationship quality was also not impacted by gender \(t (87) = -1.16, p = .87\). Given that no significant gender differences were observed on the study outcome variables, gender was not controlled for in subsequent analyses. Descriptive statistics for partner 1 and partner 2 of all dyads \((M, \text{Skew, and Kurtosis})\) are provided in Table 4.1

**Relationship status and time spent together.** Couples included in the study varied regarding their relationship status (dating, living together, or married) and the amount of time they spent with each other weekly. These variables were thus examined to determine whether they contributed to important differences among couples in the current study.

A MANOVA was conducted to examine differences between couples who are dating, living together, or married. Due to the discrepant sample sizes between couples who were dating (55), living together (23), and married (6) the assumption of equal variances was tested and satisfied using Levene’s test (Nordstokke & Zumbo, 2010). No statistically significant difference in study variables (sacrifice motives and relationship quality) were observed based on couples’ relationship status, \(F (12, 62) = .50, p = .91\); Wilk’s \(\Lambda = .83\). As a result, analyses will include all couples regardless of relationship status.

The amount of time couples reported spending with their partners ranged between 6 to 102 hours each week. A linear regression revealed that although relationship quality was not significantly related to the amount of time partners spent with each other weekly \((F (1, 81) =

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1 Significantly skewed variables were log transformed to improve normality. However, utilizing transformed variables in subsequent analyses did not lead to differences in the pattern of results. Therefore, original (untransformed) variables were used for the current analyses.
sacrifice motives were related to the amount of time couples spent together. Both approach and avoidance sacrifice motives were noted to decrease as couples spent more time together ($\beta = -.25, p = .05; f^2 = .07$ and $\beta = -.28, p = .03; f^2 = .09$, respectively). As a result, time spent together each week was controlled for in subsequent analyses.

**Sacrifice frequency.** In terms of sacrifice frequency, participants on average reported making a sacrifice 1.19 times during the 7-day study ($SD = 1.16, Range = 0-6$). In 39 couples (46%) both partners reported making at least one sacrifice throughout the study while only one partner making at least one sacrifice throughout the study in the remaining 45 couples. A linear regression with a dummy-coded variable, differentiating between couples where only one or both partners sacrificed, was used to assess the impact of partner sacrifice on relationship quality. Results indicated that relationship quality was not significantly different between couples in which both partners sacrificed or only one partner sacrificed, $F(1, 83) = 1.08, p = .34$. As a result, all analyses will include both sets of couples. Multilevel modelling was then used to examine the role of sacrifice frequency. Overall, more frequent sacrificing led to individuals experiencing poorer relationship quality ($b = -.11, p = .02; r_p = .23$), however, frequency of sacrificing did not impact their partner’s relationship quality ($b = .02, p = .71$).

Correlational analyses were conducted separately for each partner to examine the associations between study variables (see Table 5). It is important to note that simple bivariate correlations fail to reflect the complex nature of dyadic relationships, as such correlations should be interpreted with caution. Correlations are provided for descriptive purposes and significance is not reported. Differences between partners should be disregarded as random error as partners are indistinguishable.
Aim 1: To Examine the Dyadic Relational Orientation Model of Sacrifice Motives and Relationship Quality

The APIM was used to examine the relational orientation model of sacrifice motives and relationship quality within the dyadic sample (Kenny, Kashy & Cook, 2006). Actor effects, the effect of predictors on a participant’s relationship quality, and partner effects, the effect of predictors on a partner’s relationship quality, were included simultaneously (see regression weights in Figure 4).

In terms of the actor effects, as expected RO+ and RO+/- were weakly (though significantly) related to greater reported relationship quality ($r_p = .21$). RO+ and to a lesser extent RO+/-, were expected to be indirectly related to relationship quality via approach motives. RO- was expected to be indirectly (negatively) related to relationship quality through avoidance motives. However, contrary to the results of Study 1, relational orientation facets were not indirectly related to relationship quality through approach sacrifice motives (95% CIs: RO+ [-.03 -.02], RO- [-.03 -.01], RO+/- [-.03 -.02]) or avoidance sacrifice motives (95% CIs: RO+ [-.05 -.02], RO- [-.05 -.01], RO+/- [-.04 -.02]).

In terms of partner effects, there were no significant direct relationships from relational orientation or sacrifice motives to their partner’s reported relationship quality. Relational orientation facets were also not indirectly related to relationship quality through approach sacrifice motives (95% CIs: RO+ [-.01 -.06]; RO- [-.03 -.04]; RO+/- [-.02 -.03]) or avoidance motives (95% CIs: RO+ [-.04 -.01]; RO- [-.04 -.01]; RO+/- [-.04 -.02]).

In summary, while direct actor effects were found for RO+ and RO+/- on relationship quality, no significant indirect actor or partner effects were found.
Aim 2: To Examine Accuracy and Bias in Perceptions of Partner’s Sacrifice Motives and its Impact on Relationship Quality

Participants reported perceiving their partner making a sacrifice 1.30 times during the 7-day study ($SD = 1.29$, Range = 0-6), slightly greater than their own sacrifice frequency (1.19 times, as reported above). The frequency with which participants are perceiving and making judgments about their partner suggests that it is an important variable to examine. Perceptions of sacrifice behaviours and motives were examined in order to understand how perceptions affect relationships, whether these perceptions were accurate or biased, and whether accurate or biased perceptions were beneficial for a relationship.

Aim 2.1: Perceptions of sacrifice frequency and motives: Multi-level modelling. The effect of relational orientation on sacrifice perceptions were first examined. Multi-level modelling indicated that relational orientation styles did not affect an individual’s perceptions of their partner’s sacrifice behaviours (frequency) or motives. Specifically, relational orientation style did not impact perceptions of a partners’ sacrifice frequency ($RO+ \beta = -.12$, $p = .25$; $RO+/\beta = -.07$, $p = .49$; $RO- \beta = -.03$, $p = .79$), approach sacrifice motives ($RO+ \beta = -.07$, $p = .47$; $RO+/\beta = .05$, $p = .63$; $RO- \beta = -.05$, $p = .54$) or avoidance sacrifice motives ($RO+ \beta = .25$, $p = .07$; $RO+/\beta = .17$, $p = .22$; $RO- \beta = .03$, $p = .84$).

The role of perceptions on one’s own relationship quality was next examined for sacrifice frequency and motives data. Results indicated that perceptions of a partner’s sacrifice frequency were not associated with relationship quality ($\beta = .01$, $p = .61$), as a result this variable was not examined further in the remaining analyses. However, perceptions of sacrifice motives did impact relationship quality. Specifically, perceiving greater approach motivated sacrifices led to greater relationship quality for the perceiver ($\beta = .16$, $p < .01$; $r_p = .31$), while perceiving greater
avoidance motivated sacrifices led to less relationship quality for the perceiver ($\beta = -.14, p = .00; r_p = .41$). These results suggest that how a partner perceives the other’s sacrifice motives, whether approach or avoidance motives, plays an important role in their own experience of relationship quality.

**Aim 2.2: Accuracy and bias in perceptions: Truth and bias model.** The factors that contribute to perceptions of a partner's sacrifice motives were then examined. Specifically, whether perceptions of sacrifice motives are driven by their partner’s true motives (*true accuracy*) or biased by their own sacrifice motives (*projected bias*). The Truth and Bias model (see Figure 3; West & Kenny, 2011) was utilised to examine accuracy and bias in perceptions of partners’ sacrifice motives, and the moderating role of relational orientation styles. The results are presented in Table 6. Note that these analyses are for motives and not for behaviors (i.e., frequencies or number of reported instances).

**Approach motives.** To the question of accuracy in perceptions of a partner's approach sacrifice motives, no directional bias was found. This suggests that perceivers did not consistently overestimate or underestimate their partner’s approach sacrifice motives. In examining the factors that drove perceivers’ judgments, perceptions of approach sacrifice motives were driven by a perceiver’s own approach motives (*projected bias; $r_p = .41$*), and because partners were truly similar in approach sacrifice motives their perceptions were accurate (*projected accuracy*). Overall, perceptions of approach sacrifice motives were accurate. However, the accuracy (i.e., correspondence between partner report and perceptions) was a by-product of assuming that their partner’s motives were similar to their own. A partner's sacrifice motives would appear to be difficult to perceive directly, and therefore accuracy is a result of the combined projection of one's own motives onto the partner and where the partner happens to be
similar to the perceiver (i.e., projected accuracy). Perception of approach motives was not moderated by relational orientation styles.

**Avoidance motives.** With regards to perceptions of avoidance sacrifice motives, as for approach motives, no directional bias was found. As a result, perceivers did not consistently overestimate or underestimate their partner’s avoidance sacrifice motives. Perceptions of avoidance sacrifice motives were driven by their partner’s actual sacrifice motives (true accuracy; $r_p = .49$) and their own avoidance motives (projected bias; $r_p = .36$). However, true similarity did not play a significant role in these perceptions, therefore, when partners projected their own motives it biased their perceptions. As a result, perceptions of avoidance sacrifice motives were both accurate and biased. Perception of avoidance motives was not moderated by relational orientation styles.

**Aim 2.3: Consequences of accuracy and bias of perceptions: Multilevel polynomial regression.** The third set of analyses tested the consequences of agreement (accuracy) and disagreement (bias) between perceptions of a partner’s sacrifice motives and the partner’s actual sacrifice motives. Multilevel polynomial regression with response surface analysis was conducted to examine whether perceiving a partner’s sacrifice motives accurately or inaccurately benefits the relationship. The results are presented in Table 7. Only significant results were plotted and discussed.

The results revealed different consequences for approach and avoidance sacrifice motives. In regard to approach sacrifice motives, there was a significant actor effect of accuracy. Specifically, accurately perceiving greater approach motives was related to greater relationship quality for the perceiver (see Figure 5; moving from the front to the back corner of the graph). However, in regard to avoidance sacrifice motives, a significant partner effect of bias was found.
Overestimating (compared to underestimating) a partner’s avoidance motives was associated
greater relationship quality for the partner (see Figure 6; moving from the left to right outer
corner of the graph). As a result, accurate perceptions of approach motives are beneficial for the
perceiver, whereas overestimation of avoidance motives are beneficial for the partner.

Discussion

Given the importance of relationship quality on personal well-being, researchers have
attempted to understand the individual factors that contribute to behaviours in relationships and
the overall quality of the relationship. The purpose of Study 2 was twofold: 1) to replicate and
extend the findings of Study 1 by dyadically examining the relational orientation model of
sacrifice motives and relationship quality, and 2) to determine the role of accuracy and bias in
perceptions of their partner’s sacrifice behaviours and motives and its impact on relationship
quality.

The majority of sacrifices made and perceived by participants were small with no
identified costs and involved a short time commitment. This was expected given the daily nature
of the study, as large sacrifices are likely infrequent within sustained romantic relationships.
However, sacrifice behaviours were generally infrequent, as participants reported sacrificing and
perceiving their partner sacrificing on average once a week. Other studies using the same
measure of sacrifice behaviours has found similar rates of sacrifice behaviours in long-term
romantic relationships (Impett et al., 2005; Impett, Javam et al., 2013; Visserman et al., 2018).

A Dyadic Relational Orientation Model of Sacrifice Motives and Relationship Quality

In an attempt to replicate the findings of Study 1, the relational orientation model of
sacrifice motives and relationship quality was examined dyadically. As expected from Study 1,
RO+ and RO+- was linked to greater relationship quality. However, RO- was not linked to
relationship quality. This is consistent with the conceptualization of relational orientation styles as consisting of adaptive aspects (RO+), maladaptive aspects (RO-), and a mid-point consisting of both adaptive and maladaptive aspects (RO+/−: Do Couto & Hennig, 2015; Hennig & Walker, 2008). In terms of sacrifice motives, no significant relationships were documented between motives and relationship quality, which was contrary to previous studies (Impett et al., 2005; Impett, Gere et al., 2013). No support for the differential indirect relationships between relational orientation styles and relationship quality through approach and avoidance sacrifice motives was found in the current study. The results of Study 1 were not replicated, which is likely a result of the underpowered nature of the current study.

The dyadic examination of the model also revealed that an individual’s relational orientation and sacrifice motives had no significant impact on their partner’s experienced relationship quality as was expected. However, previous research has indicated that partner effects are have been consistently found to be small (Dyrenforth, Kashy, Donnellan & Lucas, 2010) which may explain why they may not have been detected in the current underpowered study.

**Accuracy and Bias in Perceptions of Partners’ Sacrifice**

In support of research that has emphasized the importance of perceptions of a partner, perceptions of approach and avoidance motives significantly impacted relationship quality of the perceiver (Impett et al. 2005; Impett, Gere et al., 2013; Visserman et al., 2017). Specifically, individuals who perceived greater approach sacrifice motives by their partner also experienced greater relationship quality, whereas individuals who perceived greater avoidance sacrifice motives by their partner experienced lower relationship quality.
When it came to accuracy of these perceptions, it was found that perceptions of a partner’s approach sacrifice motives were primarily based on an assumed similarity bias. That is, perceivers judged their partner’s approach sacrifice motives to be similar to their own, and because partner’s approach motives were actually similar, those perceptions were accurate. This is consistent with other findings that suggest that the similarity bias is a beneficial heuristic in improving perception accuracy (Murray et al., 2002), and is the primary mechanism in perceptions of approach motives (LaBuda, 2019). In fact, accurately perceiving a partner’s approach motives was found to lead to greater relationship quality for the perceiver. Given what other researchers have documented regarding the benefits of perceiving greater approach sacrifice motives (Impett et al. 2005; Impett, Gere et al., 2013), it would be expected that accurately perceiving a partner’s approach sacrifice motives when they are present would also lead to relationship benefits.

In terms of avoidance sacrifice motives, perceptions were both accurate and biased. That is, they were driven by both an assumed similarity between partners’ avoidance sacrifice motives (which were not similar), as well as, the partner’s actual avoidance sacrifice motives. This is consistent with other research that has demonstrated that perceivers can be both accurate and biased (Overall et al., 2012; Overall & Hammond, 2013). Given that true accuracy was only significant for avoidance sacrifice motives, suggests that avoidance-based behaviours may be more obvious to perceivers (LaBuda, 2019). However, the current study found that overperceiving, compared to underperceiving, avoidance sacrifice motives was beneficial for a partner’s relationship quality. Although this finding may be initially unintuitive, perceiving more avoidance sacrifice motives, than is present, may trigger the use of other relationship
maintenance behaviours by the perceiver. Therefore, leading partners to experience positive relationship quality. However, replication of this effect is needed to test its robustness.

This study also examined the moderating effect of relational orientation styles on accuracy and bias in perceptions of sacrifice motives. In the current study, relational orientation styles were not found to have a significant effect on the true accuracy or projected bias of perceptions of approach or avoidance sacrifice motives. Although no previous studies have specifically examined relational orientation styles within the context of perception of sacrifice motives, there is reason to believe that relational orientation styles would impact perceptions of partners’ motives, in particular avoidance motives. For example, researchers have documented that greater RO+/- is associated with greater perception of relational costs during negotiations (Amanatullah, Morris & Curhan, 2008), and, given RO-’s association with rejection sensitivity, it would also be expected to be related to greater perception of rejection (Downey & Feldman, 1996; Harper et al., 2006; Harper & Welsh, 2007). The null findings in this study may be related to the limited power of the study. It is important that this study be replicated in a larger and more diverse sample.

**Strengths and Limitations**

This study added to the current literature on relational orientation styles and relational outcomes by examining the links with sacrifice motives in natural long-term romantic relationships. Most studies on the multidimensional model of relational orientation have limited their examination to individuals (Hennig, 2012; Hennig & Walker, 2008) or to relationships with strangers (Do Couto & Hennig, 2015). However, this study’s limited statistical power precluded the examination of the relational orientation model of sacrifice motives and relationship quality over time, and even the cross-sectional dyadic examination of the model was limited to detect
only large effects. This means that many potentially meaningful effects, like partner effects that have been repeatedly found to be small (Dyrenforth et al., 2010), could not be detected.

It is important to note the current study’s limited statistical power was primarily related to the infrequent sacrifice behaviours reported by participants. Although the documented sacrifice frequency was consistent with other studies (Impett et al., 2005; Impett, Javam et al., 2013; Visserman et al., 2018), it is likely that this is an underestimation of the frequency of sacrifice in relationships. Given that most participants in Study 1 described medium and large sacrifices, suggests that those are the most easily recalled types of sacrifice behaviours. Therefore, smaller daily sacrifices, may be operationalized as “nice” things participants do for their partners without perceiving or reporting them as sacrifices (Impett & Gordon, 2010). In fact, other studies, that have operationalized sacrifices as “changes made for their partner,” and have provided examples of these events, have captured more frequent sacrifice behaviour (Ruppell & Curran, 2012; Totenhagenm et al., 2013). This supports the idea that the current study may not have accurately captured all sacrifices that partners make for one another.

The low observed reliability of the sacrifice approach motives measured in the current study also contributed to difficulty detecting important effects. Given that internal consistency issues for approach motives was also found in Study 1, it if important that future investigations examine the reliability and validity of this subscale more in depth.

Further this study also adds to the limited research on the effects of perceptions of sacrifice motives on relational outcomes (Impett et al. 2005; Impett, Gere et al., 2013; LaBuda, 2019; Visserman et al., 2017). To the best of my knowledge it is one of the first to extensively examine bias and accuracy in perceptions of sacrifice motives, and the effects of perception accuracy on relationship quality. However, considering it is one of the first of its kind it, is
important to view these results as preliminary and future studies should work to replicate these findings in order to confirm the robustness of these relationships. The current study provides a good initial point from which to continue examining the role of accuracy and bias on perceptions of partners sacrifice motives.

It is also important to note, that the current sample consisted of both opposite and same sex couples, as well as, dating, cohabiting, and married couples. All of these subsamples of dyads were merged and treated as one sample because no statistically significant differences between them were found. However, by doing this, it may limit a true examination of these relationship types and their unique experiences.
Chapter 4: General Discussion

Close interpersonal relationships fulfill an important human need to belong and are essential to personal well-being. Not all relationships are created equal and the quality of the relationship plays an important role in determining whether the relationship buffers against stressors (Proulx, Helms & Buehler, 2007) or adds additional stressors (Berry & Worthington, 2001). Relational orientation style has been established as an important predictor of relationship quality (Cross et al., 2000; Do Couto & Hennig, 2016; Hennig & Walker, 2008), however, there has been little examination of the mechanisms that contribute to these links. The current study examined sacrifice motivations as an important mechanism. A secondary goal of this research was to examine perceptions of sacrifice motives, in particular the accuracy and bias that drives these perceptions and how perceptions affect the quality of romantic relationships.

Summary of Major Findings

Predictors of relationship quality. Across two studies, the importance of an individual’s relational orientation style on the overall quality of their romantic relationship was consistently demonstrated. Specifically, relational orientation styles with adaptive components, RO+ and RO+/-, were related to greater relationship quality, while the more maladaptive style, RO-, was negatively related to relationship quality. These results extend previous research examining the multifaceted model of relational orientation which proposes three different facets or styles of relating to relationship partners that influence relationship outcomes (Hennig & Walker, 2008; Pincus & Gurtman, 1995).

The role of sacrifice motives on the quality of the relationship was also confirmed in one of the studies. In Study 1 approach sacrifice motives were positively linked to relationship quality, while avoidance sacrifice motives were negatively linked to relationship quality. This is
consistent with previous research that has documented the importance of sacrifice motives on determining the impact on the relationship (Impett, Gable & Peplau, 2005; Impett, Gere et al., 2013; Impett, Javam et al., 2013). These effects were not found in Study 2 perhaps because they were not large enough to be detected.

A relational orientation model of sacrifice motives and relationship quality. The primary goal of the current research was to test the relational orientation model of sacrifice motives and relationship quality. The model proposed that the link between relational orientation and relationship outcomes would be indirectly mediated by sacrifice motives as one relationship maintaining mechanism. Preliminary evidence for the model was obtained in the results of Study 1, as relational orientation styles were differentially related to approach and avoidance sacrifice motives which affected the quality of their relationships. In particular, individuals with greater RO+, the adaptive relational orientation style, tended to sacrifice in an attempt to increase positive outcomes as well as decrease negative outcomes which in turn increased and decreased the quality of the relationship, respectively. However, individuals with greater RO+ continued to experience positive relationship quality despite the negative impact of using avoidance sacrifice motives. It is important to note that the indirect relationships through sacrifice motives did not fully explain the link between RO+ and relationship quality, which suggests that although sacrifice motives are an important mechanism by which RO+ affects relationship quality, there may be other behaviours that also contribute to it.

In terms of RO-, the maladaptive relational orientation style, individuals were more likely to sacrifice as a way to avoid negative consequences and as a result experienced poorer relationship quality. However, individuals with greater RO+/-, which contains both adaptive and maladaptive components, were not more or less likely to sacrifice for either motive. The
relational orientation model of sacrifice motives and relationship quality was also dyadically examined in Study 2, and although no support for the model was found, caution should be taken in interpreting those results given the power limitations of the study.

It is important to note the small effects of relational orientation styles on sacrifice motives in the current research. Despite being seemingly conceptually related relational orientation styles and sacrifice motives were only modestly related. Although no previous studies have examined these two variables, it would be expected that individuals who endorse “I feel terrible if I upset someone” (RO+/- item) would also be likely to sacrifice “to prevent my partner from becoming upset” (avoidance sacrifice motive), as an example. One possible reason for these weak associations may be due to the specificity of the measurement of relational orientations. In the current research, relational orientation was measured as a broad stable trait in the context of "those close to me," including family and friendships, whereas sacrifice motives were measured in the context of participants’ current romantic relationship. In fact, items assessing relational orientation refer to various close relationships, including “friends,” “family,” and “others.” Although relational orientation is believed to be a stable trait, researchers have found that relationship styles do differ across different types of relationships, and that they are related to contextual factors in specific relationships (Coskan, Phalet, Gungor & Mesquita, 2016; Neff & Harter, 2003). For example, a mutual relationship style (balanced concern for self and partner) is most often reported within friendships, as opposed to greater self-focused and other-focused styles in parent and romantic relationships (Neff & Harter, 2003). As a result, future research may benefit from measuring relational orientation within the context of the relationship being examined in order to understand how a participant’s specific relational orientation affects their behaviours within that relationship.
Accuracy and bias in perceptions of partners’ sacrifices and consequences for relationship quality. A secondary aim of the research was to also examine the factors that influence perceptions of sacrifice motives and how accuracy of these perceptions impact relationship outcomes. It was found that individuals who perceived greater approach sacrifice motives in their partners experienced greater relationship quality, while perceiving greater avoidance sacrifice motives led to individuals experiencing poorer relationship quality. This supports the idea that perception of a partner’s motives has an important impact on the quality of the relationship (Impett et al. 2005; Impett et al., 2013; Visserman et al., 2017).

In terms of what factors shape perceptions, a similarity bias in which individuals assume that their partners’ sacrifice motives are similar to their own, influenced perceptions of both approach and avoidance sacrifice motives. However, this assumption led to accurate judgments of approach sacrifice motives because partners were truly similar but led to biased judgements of avoidance sacrifice motives as partners were not similar in their motives. Truly accurate perceptions were only in relation to avoidance sacrifice motives, as perceptions of a partner’s sacrifice motives were directly related to a partner’s actual avoidance motives. These findings were consistent with other research (LaBuda, 2019) and suggests that sacrificing in an attempt to avoid negative consequences may be more obvious to perceivers and directly influences perceptions.

The accuracy of which partners perceive sacrifice motives was found to have an impact on the quality of the relationship. Specifically, accurately perceiving a partner’s approach sacrifice motives was linked to individuals experiencing greater relationship quality. Whereas, overperceiving a partner’s avoidance sacrifice motives, compared to underperceiving, led to
greater relationship quality for that partner. This may be due to triggering other relationship maintenance processes in order to improve the relationship.

**Clinical Considerations**

Researchers have consistently demonstrated that positive close interpersonal relationships support the development of happiness and buffers against mental health concerns (Braithwaite, Delevi & Fincham, 2010; Demir, 2008). On the other hand, negative close interpersonal relationships have an adverse impact on an individual’s well-being. Specifically, individuals in unsatisfying and distressed relationships experience greater physical health difficulties (Holt-Lunstad, Birmingham & Jones, 2008) and mental health concerns (Whisman & Uebelacker, 2006). As a result, understanding the factors that lead to positive relationships as opposed to unsatisfying and troubled relationships has larger societal implications. The current study has important clinical considerations for clinicians working with couples.

Given that sacrifice is an important relationship maintenance behaviour present in all relationships, it is important that clinicians have a good understanding of the role of sacrifices and the motives underlying them in relationships. The current research provides support for the fact that individuals do not consciously acknowledge sacrificing for their partners often (Impett et al., 2005; Impett, Javam et al., 2013; Visserman et al., 2018), and in fact individuals who report more frequent sacrificing are likely to experience poorer relationship quality. These findings may be related to the operationalization of sacrifice, as other studies that have defined sacrifice as “changes” have captured more frequent reports (Ruppell & Curran, 2012; Totenhagenm et al., 2013). This would suggest that clinicians should be careful about the language used to speak of daily sacrifices and that speaking of sacrifice as “changes” or “kind
acts” for a partner may help clinicians to better assess sacrifice and can help change individuals’ potential negative connotation with sacrifice.

Given preliminary support for the relational orientation model of sacrifice motives and relationship quality, another application of the current research would be to use this model in couple intervention. This model provides support for the idea that individual factors directly influence behaviours and interactions in relationships which shape the experienced quality of the relationship. For example, the adaptive relational orientation, RO+, involves an even balance between both partners’ needs in the relationship and leads to approach motivated sacrifices and buffers against the negative effects of avoidance motivated sacrifices which results in positive relationships (Do Couto & Hennig, 2015; Hennig & Walker, 2008; Morry & Kito, 2009). Whereas the maladaptive relational orientation, RO-, leads individuals to be overly compliant with their relationship partners due to fear of rejection which has been shown to result in use of avoidance motivated sacrifices, negative relational, and personal outcomes (Harper & Welsh, 2007; Hennig & Walker, 2008). As a result, couple therapists would benefit from assessing individual relational orientation styles and sacrifice motives and work to address the connection between relational orientation and behaviours in relationships.

Principles similar to those in Emotionally Focused Therapy (EFT) for couples may be applicable to addressing these concerns of relational orientation styles and sacrifice motives. Particularly the view that problematic behaviours in relationships often are a result of unmet fundamental needs (Johnson, 2004). This framework is also relevant to relational orientation styles, particularly the maladaptive relational orientation of RO-, reflects an unmet need of security in the relationship. This in combination with a cognitive intervention in order to
reinforce approach motivated sacrifice and perceptions of a partner’s approach sacrifice motives may help to promote positive relationship outcomes (Figuerres, 2008).

**Limitations and Future Directions**

The current research advances knowledge on how relational orientation shapes behavioural motivation and consequently relational outcomes. It provides preliminary support for the relational orientation model of sacrifice motives and relationship quality. In addition, this research is the first to examine accuracy and bias in individuals’ perceptions of their partners’ sacrifice motives.

It will be important to replicate and extend these findings to a larger community sample of individuals in longer and more committed relationships (Impett & Gable, 2012). The participant samples used in the current research consisted of mostly upper year college students in dating relationships, which may compromise the generalizability of these findings. Van Lange and colleagues (1997) suggested that couples are likely adopt a habitual pattern of willingness to sacrifice as relationships progress and become more committed. However, other research has found that willingness to sacrifice remains dynamic in relationships overtime and that increased commitment (e.g., entering into cohabitation, marriage, or having a child) did not change sacrifice willingness (Johnson, Horne & Neyer, 2019). However, no research has examined how relationship commitment affects sacrifice motives and it may be that avoidance sacrifice motives are more beneficial for more committed relationships where the cost of relationship dissolution is high. Therefore, it is important to replicate the study in a sample with longer and more committed relationships. Future studies should also aim to examine this model in more diverse samples of romantic couples, such as same sex and racially diverse couples, in order to determine whether these results are also applicable to different samples.
Another important area for future directions is to clarify the conceptualization of sacrifice. Previous research has documented mixed findings about the frequency of sacrifice behaviours in long-term romantic relations. Similar to the current study, some note that participants report sacrificing once a week (Impett et al., 2005; Impett, Javam et al., 2013; Visserman et al., 2018), but other researchers have documented more frequent self-reported sacrifice (Figuерres, 2008; Ruppell & Curran, 2012; Totenhagenm et al., 2013). Researchers have also found contradictory associations between sacrifice frequency and relationship outcomes. Although the current study found a negative link, others have documented a positive association (Figuерres, 2008). These distinctions may be related to differences in how sacrifice is operationalized and suggests that researchers may be measuring different constructs. Therefore, qualitative research on how people define sacrifice and if/how they distinguish sacrifice from other similar relationship maintenance behaviours such as social support. This may be helpful to better understanding how relationship partners think about and classify sacrifice.

Future studies may also benefit accounting for the effects of the magnitude and domain of sacrifices when examining sacrifice motives. Given the distinct personal costs between small and larger sacrifices, as well as differing societal expectations regarding specific types of sacrifices (e.g., women are more likely to make sexual sacrifices, see Impett & Peplau, 2003), it is possible that the observed associations of the current research may change depending on the magnitude and domain of the sacrifice. Further, it remains unclear how flexible relational orientation styles are to change and mechanisms that clinicians and partners can use to support individuals in adopting a more adaptive style. Research has shown some effectiveness with security priming in relation to attachment styles (Gillath, Selcuk, & Shaver, 2008; Mikulincer, Shaver, Sahdra & Bar-On, 2013), however, it remains unknown whether this will be effective with relational
orientation styles. Future studies that explore experimental priming manipulations of relational orientation styles would be important to uncover specific intervention mechanisms that can be used by clinicians in order to improve relationship quality.

**Conclusion**

The findings of this research provide support for the idea that relational orientation impacts how individuals behave in relationships which in turn results in different qualities of relationships. It also is the first to examine the factors that affect individuals’ perceptions of a partner’s sacrifice motives, and how accuracy of these perceptions impacts the relationship. Understanding individuals’ behaviours and their perceptions of their partners’ behaviours is crucial to better understanding romantic relationship and its impact on individual well-being.
References


support in ambulatory blood pressure and mental health. *Annual Behavioral Medicine, 35*(2), 239-244. doi: 10.1007/s12160-008-9018-y


## Tables and Figures

### Table 1

*Sacrifice categories and descriptions*

<table>
<thead>
<tr>
<th>Categories</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Small</strong></td>
<td>Inconsequential; lasts less than 3 hours</td>
</tr>
<tr>
<td><strong>Medium</strong></td>
<td>Involves giving up time with other important relationships or activities; lasts most of the day to a couple of days</td>
</tr>
<tr>
<td><strong>Large</strong></td>
<td>Involves long-term lifestyle change, pain/harm, modifying job/education goals, or going against values; lasts more than a couple of days</td>
</tr>
</tbody>
</table>
Table 2

Descriptive statistics of Study 1 variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Female</th>
<th>Male</th>
<th>Skew(SE)</th>
<th>Kurtosis(SE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RO+</td>
<td>5.64 (.82)</td>
<td>5.70 (.79)</td>
<td>5.27 (.89)</td>
<td>-.77 (.11)</td>
</tr>
<tr>
<td>RO-</td>
<td>3.08 (1.20)</td>
<td>3.11 (1.22)</td>
<td>2.95 (1.11)</td>
<td>.08 (.11)</td>
</tr>
<tr>
<td>RO+/−</td>
<td>4.34 (1.04)</td>
<td>4.47 (.99)</td>
<td>3.69 (1.05)</td>
<td>-.25 (.11)</td>
</tr>
<tr>
<td>Approach Motives</td>
<td>5.14 (.97)</td>
<td>5.15 (.98)</td>
<td>5.12 (.95)</td>
<td>-.48 (.11)</td>
</tr>
<tr>
<td>Avoidance Motives</td>
<td>4.19 (1.39)</td>
<td>4.15 (1.39)</td>
<td>4.41 (1.33)</td>
<td>-.22 (.11)</td>
</tr>
<tr>
<td>Relationship Quality</td>
<td>6.94 (1.30)</td>
<td>7.00 (1.29)</td>
<td>6.58 (1.30)</td>
<td>-1.35 (.11)</td>
</tr>
</tbody>
</table>

Notes. RO+ = Interdependent self; RO- = Silencing self; RO+/− = Sacrificial self.
Table 3

*Intercorrelations among Study 1 variables*

<table>
<thead>
<tr>
<th></th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
<th>6.</th>
</tr>
</thead>
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<tr>
<td>1. RO+</td>
<td>.10*</td>
<td>.37**</td>
<td>.11*</td>
<td>.08</td>
<td>.29**</td>
</tr>
<tr>
<td>2. RO-</td>
<td></td>
<td>.53**</td>
<td>-.03</td>
<td>.20**</td>
<td>.03</td>
</tr>
<tr>
<td>3. RO+/-</td>
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<td>.05</td>
<td>-.02</td>
<td>.21**</td>
<td></td>
</tr>
<tr>
<td>4. Approach motives</td>
<td></td>
<td>.36**</td>
<td>.17**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Avoidance motives</td>
<td></td>
<td></td>
<td>-.08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Relationship Quality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Notes. RO+ = Interdependent self; RO- = Silencing self; RO+/- = Sacrificial self
* p < .05  ** p < .01*
### Table 4

*Descriptive statistics of Study 2 variables*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean (SD)</th>
<th>Skew (SE)</th>
<th>Kurtosis (SE)</th>
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<td>Partner 1</td>
<td>Partner 2</td>
<td>Partner 1</td>
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<td></td>
<td></td>
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<tr>
<td>RO+</td>
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<td>5.24 (.97)</td>
<td>-.87 (.26)</td>
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<td>RO-</td>
<td>3.76 (.96)</td>
<td>3.69 (1.11)</td>
<td>.05 (.26)</td>
</tr>
<tr>
<td>RO+/-</td>
<td>4.94 (.95)</td>
<td>4.85 (1.01)</td>
<td>-.31 (.26)</td>
</tr>
<tr>
<td><strong>Daily Variables</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Approach Motives</td>
<td>4.59 (1.06)</td>
<td>4.49 (.99)</td>
<td>-.13 (.30)</td>
</tr>
<tr>
<td>Avoidance Motives</td>
<td>3.49 (1.50)</td>
<td>3.35 (1.14)</td>
<td>.19 (.30)</td>
</tr>
<tr>
<td>Perceived Approach Motives</td>
<td>4.67 (1.08)</td>
<td>4.55 (1.13)</td>
<td>-.27 (.30)</td>
</tr>
<tr>
<td>Perceived Avoidance Motives</td>
<td>3.14 (1.67)</td>
<td>3.43 (1.58)</td>
<td>.49 (.30)</td>
</tr>
<tr>
<td>Relationship Quality</td>
<td>6.30 (.65)</td>
<td>6.29 (.61)</td>
<td>-1.44 (.26)</td>
</tr>
</tbody>
</table>

*Notes.* RO+ = Interdependent self; RO+/- = Sacrificial self; RO- = Silencing self.
Table 5

<table>
<thead>
<tr>
<th></th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
<th>6.</th>
<th>7.</th>
<th>8.</th>
<th>9.</th>
<th>10.</th>
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</thead>
<tbody>
<tr>
<td>1. RO+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.48</td>
</tr>
<tr>
<td>2. RO+/-</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. RO-</td>
<td>.15</td>
<td>.53</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>4. Sacrifice Frequency</td>
<td>-.16</td>
<td>-.10</td>
<td>.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>5. Approach</td>
<td>.07</td>
<td>.06</td>
<td>-.02</td>
<td>-.09</td>
<td></td>
<td></td>
<td></td>
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<td>6. Avoidance</td>
<td>.08</td>
<td>.07</td>
<td>.09</td>
<td>-.03</td>
<td>.44</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>7. Perceived Sacrifice Frequency</td>
<td>-.11</td>
<td>-.03</td>
<td>.03</td>
<td>-.06</td>
<td>-.24</td>
<td>-.06</td>
<td>.05</td>
<td>-.02</td>
<td>-.02</td>
<td>.10</td>
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<td>8. Perceived Approach</td>
<td>-.21</td>
<td>-.01</td>
<td>.11</td>
<td>-.27</td>
<td>.45</td>
<td>-.05</td>
<td>-.20</td>
<td></td>
<td>.41</td>
<td>.34</td>
</tr>
<tr>
<td>9. Perceived Avoidance</td>
<td>.26</td>
<td>.15</td>
<td>-.09</td>
<td>.33</td>
<td>.28</td>
<td>.33</td>
<td>-.03</td>
<td>.42</td>
<td></td>
<td>-.37</td>
</tr>
<tr>
<td>10. Relationship Quality</td>
<td>.12</td>
<td>-.01</td>
<td>-.10</td>
<td>-.29</td>
<td>.07</td>
<td>-.32</td>
<td>-.11</td>
<td>.23</td>
<td>-.38</td>
<td></td>
</tr>
</tbody>
</table>

Notes. RO+ = Interdependent self; RO+/- = Sacrificial self; RO- = Silencing self; Sacrifice Frequency = number of sacrifices reported summed across the 7 days. \(^1\)Parital correlations controlling for the other sacrifice motive. \(^2\)Partial correlation controlling for other perceived sacrifice motive. Partner 1’s correlations on the lower portion of the diagonal and Partner 2’s correlations on the upper portion of the diagonal.
Table 6

Directional bias, true accuracy, projected bias, and projected accuracy, moderated by RO style, in perceptions of a partner’s sacrifice

<table>
<thead>
<tr>
<th></th>
<th>b [SE]</th>
<th>t</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Partner’s Approach Motives</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Directional Bias</td>
<td>.05 [.11]</td>
<td>.43</td>
<td></td>
</tr>
<tr>
<td>True Accuracy</td>
<td>.19 [.13]</td>
<td>1.46</td>
<td></td>
</tr>
<tr>
<td>RO+</td>
<td>.02 [.13]</td>
<td>.14</td>
<td></td>
</tr>
<tr>
<td>RO-</td>
<td>.12 [.13]</td>
<td>.92</td>
<td></td>
</tr>
<tr>
<td>RO+/-</td>
<td>-.09 [.11]</td>
<td>-.77</td>
<td></td>
</tr>
<tr>
<td>Projected Bias</td>
<td>.38 [.13]**</td>
<td>2.97</td>
<td></td>
</tr>
<tr>
<td>RO+</td>
<td>.10 [.12]</td>
<td>.84</td>
<td></td>
</tr>
<tr>
<td>RO-</td>
<td>.02 [.14]</td>
<td>.18</td>
<td></td>
</tr>
<tr>
<td>RO+/-</td>
<td>.20 [.14]</td>
<td>1.46</td>
<td></td>
</tr>
<tr>
<td>Projected Accuracy</td>
<td>.12</td>
<td></td>
<td>[.03, .26]</td>
</tr>
</tbody>
</table>

| **Partner’s Avoidance Motives** |        |      |           |
| Directional Bias              | -.11 [.14] | -.81 |           |
| True Accuracy                 | .56 [.13]** | 4.25 |           |
| RO+                          | -.03 [.14] | -.23 |           |
| RO-                          | .04 [.16] | .23  |           |
| RO+/-                        | -.06 [.15] | -.37 |           |
| Projected Bias                | .38 [.13]** | 2.92 |           |
| RO+                          | .28 [.15] | 1.86 |           |
| RO-                          | .06 [.11] | .52  |           |
| RO+/-                        | .05 [.15] | .45  |           |
| Projected Accuracy            | .03     |      | [-.05, .13]|

Notes. RO+ = Interdependent self; RO+/- = Sacrificial self; RO- = Silencing self. *p < .05. **p < .01.
Table 7

Effects of direct accuracy and directional bias in perceptions of a partner’s sacrifice motives on relationship quality and well-being using polynomial regression with response surface analyses.

<table>
<thead>
<tr>
<th>Multilevel Polynomial Regression</th>
<th>Response Surface Analysis</th>
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<tbody>
<tr>
<td></td>
<td>Line of Agreement</td>
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<tr>
<td></td>
<td>b₀</td>
</tr>
<tr>
<td><strong>Approach Motives</strong></td>
<td></td>
</tr>
<tr>
<td>Relationship Quality</td>
<td></td>
</tr>
<tr>
<td>Perceiver’s</td>
<td>6.29 (.10)**</td>
</tr>
<tr>
<td>Partner’s</td>
<td>6.30 (.10)**</td>
</tr>
<tr>
<td><strong>Avoidance Motives</strong></td>
<td></td>
</tr>
<tr>
<td>Relationship Quality</td>
<td></td>
</tr>
<tr>
<td>Perceiver’s</td>
<td>6.11 (.09)**</td>
</tr>
<tr>
<td>Partner’s</td>
<td>6.31 (.09)**</td>
</tr>
</tbody>
</table>

**Notes.** P = perception of partner’s score; B = partner’s actual score. Numbers outside parentheses are unstandardized coefficients; numbers inside parentheses are standard errors. a₁ = line of perfect agreement; a positive value indicates that when perceptions of and partner’s actual score are in agreement and increase, relationship quality increase, while a negative value indicates that when perceptions of and a partner’s actual score are in agreement and increase, relationship quality decrease. a₂ indicates whether the line of perfect agreement is linear or nonlinear; a significant value indicates nonlinearity. a₃ = the line of disagreement; a positive value indicates that overperception is better than underperception for relationship quality and a negative value indicates that underperception is better than overperception for relationship quality. a₄ indicates whether the line of disagreement is linear or nonlinear; a significant value indicates nonlinearity. *p < .05. **p < .01
Figure 1. Study 1 parallel mediation model regression coefficients of relational orientation model of sacrifice motives and relationship quality. Note. RO+ = Interdependent self; RO+/- = Sacrificial self; RO- = Silencing self *p < .05  **p < .01
Figure 2. Study 2 path model of the dyadic relational orientation model of sacrifice motives and relationship quality. Note. P1 = Partner 1; P2 = Partner 2; Solid lines indicate actor effects. Dashed lines indicate partner effects. Partner effects are only illustrated for P1.
Figure 3. Applying West and Kenny’s (2011) truth and bias model to sacrifice motives. Note. P1 = Partner 1. P2 = Partner 2. Projected accuracy = true similarity + projected bias.
Figure 4. Study 2 Actor-Partner Independence Model (APIM) regression coefficients of relational orientation model of sacrifice motives and relationship quality. Note: RO+ = Interdependent self; RO+/− = Sacrificial self; RO− = Silencing self * p < .05  ** p < .01
Figure 5. Response surface plots for the effect of perceptions of a partner’s approach sacrifice motives and a partner’s actual approach sacrifice motives on a perceiver’s own relationship quality. Note. P1’s actual and P2’s perception were centered on the midpoint of their respective Likert scales.
Figure 6. Response surface plots for the effect of perceptions of a partner’s avoidance sacrifice motives and a partner’s actual avoidance sacrifice motives on their partner’s relationship quality. Note. P1’s actual and P2’s perception were centered on the midpoint of their respective Likert scales.
Appendix A: Study 1 Measures

Demographic
Please answer the following questions with your dating relationship partner in mind.

1. Age of partner __________________

2. Gender of partner
   - Female
   - Male
   - Transgender Female
   - Transgender Male
   - Other ___________________

3. How long have you known each other? (in months) __________________

4. How many hours a week do you spend together? __________________

5. How many collective hours a week do you communicate with your partner (e.g. phone, text, skype)? __________________

Please answer the following questions about yourself.

1. Age __________________

2. Gender
   - Female
   - Male
   - Transgender Female
   - Transgender Male
   - Other ___________________

3. Ethnicity
   - White
   - Asian or Asian Canadian
   - Black or African Canadian
   - Hispanic or Latino
   - First Nations
   - Other ___________________

4. Are you currently in an exclusive dating relationship?
   - Yes
   - No
Sacrifice Motivation

Describe a situation in which you had the opportunity to do something that you did not particularly want to do, or give up something you did want to do, for the sake of your partner.

Please provide a detailed account about how the situation came about, who was involved, the choices you were facing and the choice you made and why you made it.

______________________________________________________________________________

___________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

Please use the scale below to rate the importance of each of the reasons in influencing your decision.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all important</td>
<td>Neutral/Mixed</td>
<td>Extremely important</td>
<td></td>
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</tr>
</tbody>
</table>

_____ 1. To enhance intimacy in my relationship
_____ 2. To express love for my partner
_____ 3. To avoid conflict in my relationship
_____ 4. To make my partner happy
_____ 5. To prevent my partner from becoming upset
_____ 6. To feel good about myself
_____ 7. To avoid feeling guilty
_____ 8. To gain my partner’s appreciation
_____ 9. To prevent my partner from getting angry at me
_____ 10. To prevent my partner from losing interest in me
**Commitment**

Please indicate the degree to which you agree with each of the following statements regarding your current relationship.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>Complete Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do not agree at all</td>
<td>Agree somewhat</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

1. I want our relationship to last for a very long time.
2. I am committed to maintaining my relationship with my partner.
3. I would not feel very upset if our relationship were to end in the near future.
4. It is likely that I will date someone other than my partner within the next year.
5. I feel very attached to our relationship – very strongly linked to my partner.
6. I want our relationship to last forever.
7. I am oriented toward the long-term future of my relationship (for example, I imagine being with my partner several years from now).
Satisfaction (Facet Items)

Please indicate the degree to which you agree with each of the following statements regarding your current relationship using the respective scales.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
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<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don’t agree at all</td>
<td>Agree slightly</td>
<td>Agree Moderately</td>
<td>Agree Completely</td>
</tr>
</tbody>
</table>

1. My partner fulfills my needs for intimacy (sharing personal thoughts, secrets, etc.)
2. My partner fulfills my needs for companionship (doing things together, enjoying each other’s company, etc.)
3. My partner fulfills my sexual needs (holding hands, kissing, etc.)
4. My partner fulfills my needs for security (feeling trusting, comfortable in a stable relationship, etc.)
5. My partner fulfills my needs for emotional involvement (feeling emotionally attached, feeling good when another feels good, etc.)

Satisfaction (Global Items)

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do not agree at all</td>
<td>Agree somewhat</td>
<td>Completely Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. I feel satisfied with our relationship
2. My relationship is much better than other’s relationships
3. My relationships is close to ideal
4. Our relationship makes me very happy
5. Our relationship does a good job of fulfilling my needs
**Relational-Interdependent Self-Construal**

*Instructions:* Indicate the extent to which you *Agree* or *Disagree* with each of these statements using the scale below.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Slightly Disagree</td>
<td>Neutral/Mixed</td>
<td>Slightly Agree</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

  ___ 1. My close relationships are an important reflection of who I am.
  ___ 2. When I feel very close to someone, it often feels to me like that person is an important part of who I am.
  ___ 3. I usually feel a strong sense of pride when someone close to me has an important accomplishment.
  ___ 4. I think one of the most important parts of who I am can be captured by looking at my close friends and understanding who they are.
  ___ 5. When I think of myself, I often think of my close friends or family also.
  ___ 6. If a person hurts someone close to me, I feel personally hurt as well.
  ___ 7. In general, my close relationships are an important part of my self-image.
  ___ 8. Overall, my close relationships have *very little* to do with how I feel about myself.
  ___ 9. My close relationships are *unimportant* to my sense of what kind of person I am.
  ___10. My sense of pride comes from knowing who I have as close friends.
  ___11. When I establish a close friendship with someone, I usually develop a strong sense of identification with that person.
### 2-Vector Unmitigated Communion Inventory

*Instructions.* Please indicate the extent to which each statement is descriptive of you. Think of friends and people close to you when completing this questionnaire.

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all like me</td>
<td>Not like me</td>
<td>Neutral/Mixed</td>
<td>Like me</td>
<td>Definitely Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

___ 1. I keep silent if I think my opinion might create conflict.
___ 2. I feel terrible if I upset someone.
___ 3. Instead of risking confrontations with my friends I would rather not rock the boat.
___ 4. It saddens me deeply when I say or do something inconsiderate.
___ 5. I am afraid of making mistakes in conversations.
___ 6. One of the most important things to me is to avoid being unkind.
___ 7. When with friends I get anxious at the possibility of saying something wrong.
___ 8. Before I can be happy, others have to be cared for first.
___ 9. When my friends’ opinions conflict with mine, rather than asserting my own point of view I usually end up agreeing with them.
___ 10. The most important thing for me is to take care of the needs of others.
___ 11. I try to bury my feelings when I think they will cause trouble with my friends.
___ 12. I get very distressed when friends are upset.
___ 13. I think it’s better to keep my feelings to myself when they conflict with my friend’s feelings.
___ 14. If I am not highly caring, I feel like a bad person.
___ 15. If I can’t get along with somebody, I worry that something is wrong with me.
___ 16. One of the most important things is to avoid being selfish.
___ 17. I tend to judge myself by how I think my friends see me.
___ 18. I always place the needs of others above my own.
___ 19. Making mistakes in conversations does not bother me.
___ 20. For me to be happy, I need others to be happy.
___ 21. When I make decisions, my friend’s thoughts and opinions influence me more than my own thoughts and opinions.
___ 22. I often worry about others’ problems.
Appendix B: Study 2 Time 1 Measures

Please answer the following questions about yourself.

1. **How old are you?**

2. **What is your gender?**
   - Female
   - Male
   - Transgender Female
   - Transgender Male
   - Other ___________________

3. **Which of the following BEST describes your ethnic background? Please tick all that apply.**
   - White/European
   - Black/African/Caribbean
   - Aboriginal/First Nations/Metis
   - Southeast Asian (e.g. Chinese, Japanese, Korean, Vietnamese, Filipino etc.)
   - South Asian (East Indian, Sri Lankan, etc)
   - West Asian (Iranian, Afghani, etc)
   - Arab (Saudi Arabian, Palestinian, Iraqi, etc)
   - Latin American (Costa Rican, Guatemalan, Brazilian, Colombian, etc)
   - Other ___________________

4. **Which of the following best describes your HIGHEST level of education?**
   - Some high school
   - Completed high school
   - Some college/university
   - Apprenticeship training and trades
   - Completed college/university
   - Some graduate education
   - Completed graduate education
   - Professional degrees

5. **What is your employment status?**
   - Student
   - Employed for wages
   - Out of work and looking for work
   - Out of work but not currently looking for work
   - A homemaker
   - Military
   - Retired
   - Unable to work

6. **Are you currently in an exclusive relationship that has lasted 3 months or longer?**
   - Yes
   - No
Please answer the following questions with your relationship partner in mind.

1. How old is your partner?
   ____________________

2. What is your partner’s gender?
   Female
   Male
   Transgender Female
   Transgender Male
   Other ____________________

3. What is your relationship with your partner?
   Dating exclusively
   Dating (but also dating others)
   Living together (not married)
   Married

4. How long have you been in a relationship with your partner? (in months)
   ____________________

5. How many hours a week do you spend together (face-to-face)?
   ____________________

6. How many hours a week do you communicate with your partner (e.g. phone, text, skype)?
   ____________________
**Relational-Interdependent Self-Construal**

*Instructions:* Indicate the extent to which you **Agree** or **Disagree** with each of these statements using the scale below.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
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<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Slightly Disagree</td>
<td>Neutral/Mixed</td>
<td>Slightly Agree</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

12. My close relationships are an important reflection of who I am.
13. When I feel very close to someone, it often feels to me like that person is an important part of who I am.
14. I usually feel a strong sense of pride when someone close to me has an important accomplishment.
15. I think one of the most important parts of who I am can be captured by looking at my close friends and understanding who they are.
16. When I think of myself, I often think of my close friends or family also.
17. If a person hurts someone close to me, I feel personally hurt as well.
18. In general, my close relationships are an important part of my self-image.
19. Overall, my close relationships have very little to do with how I feel about myself.
20. My close relationships are unimportant to my sense of what kind of person I am.
21. My sense of pride comes from knowing who I have as close friends.
22. When I establish a close friendship with someone, I usually develop a strong sense of identification with that person.
2-Vector Unmitigated Communion Inventory

Instructions. Please indicate the extent to which each statement is descriptive of you. Think of friends and people close to you when completing this questionnaire.

Not at all like me | Not like me | Neutral/Mixed | Like me | Definitely Yes
--- | --- | --- | --- | ---
0 | 1 | 2 | 3 | 4 | 5 | 6

23. I keep silent if I think my opinion might create conflict.
24. I feel terrible if I upset someone
25. Instead of risking confrontations with my friends I would rather not rock the boat.
26. It saddens me deeply when I say or do something inconsiderate.
27. I am afraid of making mistakes in conversations
28. One of the most important things to me is to avoid being unkind.
29. When with friends I get anxious at the possibility of saying something wrong.
30. Before I can be happy, others have to be cared for first.
31. When my friends’ opinions conflict with mine, rather than asserting my own point of view I usually end up agreeing with them.
32. The most important thing for me is to take care of the needs of others.
33. I try to bury my feelings when I think they will cause trouble with my friends.
34. I get very distressed when friends are upset.
35. I think it’s better to keep my feelings to myself when they conflict with my friend’s feelings.
36. If I am not highly caring, I feel like a bad person.
37. If I can’t get along with somebody, I worry that something is wrong with me.
38. One of the most important things is to avoid being selfish.
39. I tend to judge myself by how I think my friends see me.
40. I always place the needs of others above my own.
41. Making mistakes in conversations does not bother me.
42. For me to be happy, I need others to be happy.
43. When I make decisions, my friend’s thoughts and opinions influence me more than my own thoughts and opinions.
44. I often worry about others’ problems.
Appendix C: Study 2 Daily Diary Measures

Daily Sacrifice and Motivation

Today, did you do anything that you did not particularly want to do for your partner? Or, did you give up something that you did want to do for the sake of your partner?

Yes  No

How many times did you sacrifice for your partner today?  

Please provide a brief description of one such event.

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Please use the scale below to rate the importance of each of the reasons in influencing your decision to sacrifice.

<table>
<thead>
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<th>1</th>
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<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all important</td>
<td>Neutral/Mixed</td>
<td>Extremely important</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. To enhance intimacy in my relationship
2. To express love for my partner
3. To avoid conflict in my relationship
4. To make my partner happy
5. To prevent my partner from becoming upset
6. To feel good about myself
7. To avoid feeling guilty
8. To gain my partner’s appreciation
9. To prevent my partner from getting angry at me
10. To prevent my partner from losing interest in me
Daily Perception of Partner’s Sacrifice and Motivation

Today, did your partner do anything that they did not particularly want to do for you? Or, did they give up something that they did want to do for your sake?

Yes  No

How many times did your partners sacrifice for you today?  

Please provide a brief description of one such event

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Please use the scale below to rate the importance of each of the reasons in influencing your partner’s decision.

<table>
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<tr>
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<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all important</td>
<td>Neutral/Mixed</td>
<td>Extremely important</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

____  1. To enhance intimacy in your relationship
____  2. To express love for you
____  3. To avoid conflict in your relationship
____  4. To make you happy
____  5. To prevent you from becoming upset
____  6. To feel good about him/herself
____  7. To avoid feeling guilty
____  8. To gain your appreciation
____  9. To prevent you from getting angry at him/her
____ 10. To prevent you from losing interest in him/her
Daily Relationship Quality

Please use the scale to answer the questions below.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
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<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all/None</td>
<td>Neutral/Mixed</td>
<td>Very much/ A lot</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. How satisfied with your relationship are you today?
2. How much conflict did you experience in your relationship today?
3. How close do you feel to your partner today?
4. How disappointed with your partner are you today?
5. How much love do you feel for your partner today?
6. How much rejection do you feel from your partner today?
7. How much do you feel your partner took you for granted today?