Motivation and Empathic Accuracy during Conflict Interactions in Couples: It's Complicated!

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Consent to participate

Informed consent was obtained from all individual participants included in the study.

Materials, data and code availability

The materials, data and code used in the research cannot be publicly shared but are available upon request. They can be obtained by emailing: liesbet.berlamont@ugent.be.

Author's contributions

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Data curation	Lead						
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Investigation	Lead						Supporting
Methodology	Lead			Supporting	Supporting	Supporting	Supporting
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Abstract

The aim of this study was to broadly investigate the role of relationship-, self-, and partner-serving motivation in empathic accuracy in couples' conflict interactions. To this end, a laboratory study was set up in which couples (n = 172) participated in a conflict interaction task, followed immediately by a video-review task during which they reported their own feelings and thoughts and inferred those of their partner to assess empathic accuracy. We used both trait and state measures of relationship-, self-, and partner-serving motivation, and we experimentally induced these three categories of motivation. Relationship-serving state motivation predicted greater empathic accuracy. In contrast, experimentally induced partner-serving motivation resulted in less empathic accuracy for men. Self-serving motivation was not found to be associated with empathic accuracy, nor were any of the trait measures. These findings underscore the complexity of the association between motivation and empathic accuracy in partners' conflict interactions.

Keywords: empathic accuracy, motivation, trait, state, dyadic interaction paradigm

Introduction

Accurately inferring one's romantic partner's feelings and thoughts during ongoing interactions (i.e., *empathic accuracy*; Ickes, 1993; Ickes et al., 1990) is of particular importance for how *conflict* or differences of opinion between partners are dealt with (Sillars et al., 2000). More specifically, higher levels of empathic accuracy in (newly married) couples during conflict are shown to foster more adequate problem-solving and accommodative behavior (Kilpatrick et al., 2002; Sened et al., 2020).

Given the central role of empathic accuracy in intimate relationships, and in couples' problem-solving and conflict management in particular, researchers have sought to determine the factors that contribute to higher levels of empathic accuracy. One factor that has repeatedly been suggested as influencing empathic accuracy—in general, as well as in intimate relationships—is the *motivation of the perceiver*, defined as the drive and desire to be empathically accurate (Smith et al., 2011). There is increasing evidence that, when inferring another person's ongoing feelings and thoughts, a perceiver seems to be able to dial up (but also dial down) his or her level of empathic accuracy, possibly depending on the perceiver's current motivation (for overviews, see Smith et al., 2011).

Research concerning the role of motivation in empathic accuracy has not only regarded the motivation to be accurate as an intrinsically important end goal (e.g., Klein & Hodges, 2001), but also *as a means* to achieve other goals the perceiver might have. Within the context of close relationships, the goals investigated in the literature (e.g., Hodges et al., 2015; Ickes & Simpson, 1997) can be roughly divided into three categories: relationship-serving (e.g., maintaining the relationship), self-serving (e.g., maintaining a positive self-image or accumulating benefits to the self), and other-, or partner-serving goals (e.g., providing support). Furthermore, research in the context of empathic accuracy has examined both dispositional or "trait" motives related to one's personal characteristics (e.g., attachment

style) as well as situational or contextually-specific "state" motives (e.g., the motivation to earn money in an experiment; see Ickes & Hodges, 2013, for a review).

To date, the research on motivation and empathic accuracy within the context of intimate relationships has been limited and inconclusive, with some contradictory findings having been noted (Hinnekens et al., 2018; Simpson et al., 1995; Verhofstadt et al., 2011). One important limitation is that previous studies have tended to operationalize motivation in just one way, as *either* a trait or a state variable. There are no studies we know of that have examined these different motivational measures simultaneously, or that have explicitly tested the differential outcomes these measures might predict (except for Pickett et al., 2004). As a second important limitation, partner-serving motivation in intimate relationships has scarcely been studied at all with regard to empathic accuracy, although this type of motive (i.e. other-serving motivation) is routinely studied within the domain of helping behavior (e.g., Batson, 1991; Feeney & Collins, 2003).

Additional research into motivation and empathic accuracy in couples is important for at least two reasons. First, research concerning the motivational predictors of empathic accuracy can further our theoretical understanding of how people "manage" empathic accuracy more generally, not just within the context of close relationships. Second, insight into motivated accuracy in couples, as well as its fascinating flipside of motivated *in*accuracy, when people appear to be motivated to avoid seeing their partner's true thoughts (e.g., Simpson et al., 1995), are both highly relevant for couple therapy. To date, the major schools of thought in couple therapy assume that relationship- or partner-serving motives go hand-in-hand with mutual understanding and constructive conflict strategies that are assumed to involve empathic accuracy (e.g., see Christensen et al., 1995; Gottman & Gottman, 2008). They also assume that self-serving motives can harm understanding and are associated with more destructive conflict strategies (see also Rusbult et al., 1991). Explicitly testing these

therapeutic assumptions and examining which, if any, kind of motivation increases empathic accuracy, particularly when couples are dealing with differences of opinion, is therefore warranted.

Accordingly, in the current investigation we sought to comprehensively examine the extent that a perceiver's relationship-serving, self-serving and partner-serving motivation predicts his or her level of empathic accuracy in the context of ongoing conflict interactions in couples, taking into account aspects of both the perceiver's trait motivation and the perceiver's "state" motivation around a particular relationship issue. In what follows, we will elaborate on the central concepts of our investigation.

Relationship-serving Motivation

It might seem obvious that intimate partners having a conflict interaction should be highly motivated to be accurate, in the interest of reaching the best possible outcome for their relationship. Relationship partners might also appear to be in a good position to be empathically accurate, given the evidence that the level of familiarity between interaction partners (e.g., comparing close others versus acquaintances) is positively associated with empathic accuracy (Hinnekens et al. 2018; Stinson & Ickes, 1992; Thomas & Fletcher, 2003).

Things are not that simple, however, because there is evidence that the motivation to have a good relationship can sometimes lead to *less*, rather than *more*, empathic accuracy. In a study by Simpson et al. (1995), heterosexual dating partners were required to rate aloud, in each other's presence, the attractiveness and personal appeal of opposite-sex target persons who were depicted in slides. While each partner made such ratings, the other partner attempted to infer her or his thoughts and feelings. In general, the results showed that the greater the level of *relationship threat* (based on the attractiveness of the targets and the level of security and closeness in the relationship), the lower were the perceivers' empathic

accuracy scores. Conceptually similar findings were later obtained in a study of married couples by Simpson et al. (2003).

Based on these findings, Simpson and his colleagues suggested that perceivers are sometimes motivated to be *in*accurate, rather than accurate, in order to help preserve a relationship that is currently under threat. This idea was elaborated upon in Ickes and Simpson's empathic accuracy model (1997; 2001). It presumes that, in normal circumstances, partners are motivated to be accurate, but that when the accurate inference of certain thoughts might harm the relationship (e.g., reveal a lack of commitment or irreconcilable differences; Sillars, 1985), partners can be motivated to be inaccurate in order to maintain their relationship.

An unresolved issue is whether relationship threat motivates partners to be empathically inaccurate by deliberately downgrading their inference making, or whether it motivates them to apply a biased weighting to any evidence supporting the preferred inference about their partner's state of mind. Another issue is replicability; a study by Hinnekens et al. (2018) did not find evidence that partners were motivated to reduce their level of empathic accuracy in the face of perceived relationship threat. Viewing the limited and somewhat inconsistent evidence collectively, it appears that relationship-serving motivation could either decrease or increase empathic accuracy, depending on the specific context. The reader should note that the above-mentioned studies did not directly measure motivation but instead inferred its presence from their findings.

Self-serving Motivation

Self-serving motivation, also called selfish motivation, can be defined as the motivation to be accurate because correct inferences lead to positive outcomes for the perceivers themselves (Hodges et al., 2015). The self-serving outcomes investigated in the literature range from monetary incentives to achieving a positive social outcome or

maintaining a positive self-image (Smith et al., 2011). Again, however, the relevant studies did not measure motivation directly (e.g., Klein & Hodges, 2001; Thomas & Maio, 2008) but instead inferred its presence from the results of manipulations that led to self-serving outcomes.

For example, a study by Klein and Hodges (2001, Study 2) promised payments proportionate to participants' empathic accuracy and showed improved performance (in comparison with a control condition and an informational feedback condition) on a "standard stimulus" empathic accuracy task (i.e., all participants inferred the feelings and thoughts from the same recording of a target person). However, the effects of extrinsic motivation on empathic accuracy may be sensitive to task and context: A study by Ma-Kellams and Blascovich (2013) that measured participants' accuracy in identifying how intensely another person was feeling various emotions and which used a competitive "winner takes all" monetary incentive found that financial incentives *reduced* accuracy, which these researchers theorized was due in this case to social distancing.

A more effective incentive for improving accuracy might be the promise of a positive self-image. In a study by Thomas and Maio (2008), when men (the sample was presumed to be predominantly heterosexual) were told that being more empathically accurate made men more sexually attractive to women, they were better at accurately inferring the feelings and thoughts of a target person than men in a control condition. However, this result only held for targets that were easy to read, and even this positive self-image motive may be moderated by individual differences: In Klein and Hodges' (2001) first study, women but not men, tended to be more empathically accurate when they were led to believe that their empathic capacity (a commonly endorsed component of the female gender role) was being tested.

Another study by Ickes et al. (1990) found that a perceiver's empathic accuracy was positively related to the physical attractiveness of an opposite-sex target stranger. The authors

suggested that the physical attractiveness of the target probably increased the motivation to get acquainted with that person (i.e., a rewarding social outcome), which resulted in more accurate inferences. Finally, a study by Verhofstadt et al. (2016) showed that during couples' support interactions, a support provider's level of self-reported personal distress (which is assumed to elicit self-serving motivation to relieve that distress) was not associated with his/her level of interaction-based empathic accuracy.

Taken together, the evidence concerning the impact of self-serving motivation on empathic accuracy appears to be sensitive to moderation by both the nature of the incentive and characteristics of the target, and may be most effective when the perceiver views the rewards as personally relevant and achievable. Perhaps even more importantly for the present study, the effects of self-serving motives on empathic accuracy have typically been investigated among unacquainted perceivers and targets, and less within the context of conflict interactions in couples.

Partner-serving Motivation

A person can also be motivated to be empathically accurate because it helps another person or, more specifically, one's intimate partner (e.g., by enabling the perceiver to offer more effective sympathy and support; see Ickes & Simpson, 1997). Although the empathic accuracy literature has not investigated other- or partner-serving motivation in detail, *altruistic motivation* is a distinct and commonly studied motivation in the literature on prosocial and helping behaviors (e.g., Batson, 1991; 2011; Feeney & Collins, 2001; 2003). Many similar terms, with slightly different definitions, are also used to describe this motive in the literature – e.g., otherishness (Crocker et al., 2017), empathic concern (Davis, 1983), ecosystem motivation (Crocker & Canevello, 2012), compassionate goals (Crocker & Canevello, 2008), and general, partner-specific, or unmitigated communal motivation (Clark et al., 1987; Mills et al., 2004; Fritz & Helgeson, 1998).

The motivation to promote the well-being of one's partner has been linked to several positive outcomes, such as greater personal and relationship well-being (Crocker et al., 2009; Erickson et al., 2018; Fehr et al., 2014; Le et al., 2018) and less conflict (Crocker et al., 2009), when relevant comparisons are made with the effects of self-serving motivation. However, only three studies have examined the role of other-serving motivation in empathic accuracy. In the first study, the motivation to support one's partner was positively related to a person's empathic accuracy *motivation*, although the latter was not associated with the participants' *actual* accuracy (Verhofstadt et al., 2011). In the second study, interaction-based self reports of support providers' experiences of empathic concern were not associated with their level of actual empathic accuracy (Verhofstadt et al., 2016). Laurent and Hodges (2009), however, showed that self-reported communion and empathic concern did predict empathic accuracy, but only after controlling for socially desirable responding, and using a paradigm of strangers perceiving a standard stimulus target.

Some theories consider partner-serving motivation as a part of relationship-serving motivation. Specifically, some theories suggest there are only two options in relationships: to protect one's own needs or to promote the well-being of the relationship (Fletcher et al., 2012; Kumashiro, et al., 2008; Murray et al., 2006). These theories appear to assume that when a person is motivated to promote the well-being of the partner, he or she is also motivated to promote the well-being of the relationship. However, other theories and studies include partner-serving motivation as a *separate* third category of motivation, in addition to self-serving and relationship-serving motivation. Van Lange et al. (1997) suggest that during disagreements, a partner can be motivated to act in the interest of the self or can be motivated to sacrifice his or her own interest and take broader considerations into account, such as one's desire to maintain a long-term relationship *or* the partner's needs (Kelley & Thibaut, 1978; Van Lange et al., 1997). Furthermore, the literature on social value orientation (i.e., a specific

preference for particular own-other outcome patterns—e.g., McClintock, 1972; Messick & McClintock, 1968) not only distinguishes between a pro-social orientation (maximizing joint outcomes and equality in outcomes) and a pro-self orientation (maximizing own outcomes), but also includes an altruistic orientation (maximizing the other's/partner's outcome; Rusbult & Van Lange, 2003; Van Lange, 1999; see also Fitzsimons et al., 2015, and Girme et al., 2014).

In sum, previous couples research has theoretically and/or empirically examined the idea of partner-serving motivation that is distinct from self- and relationship-serving motivation, and examining this kind of motivation in relation to empathic accuracy seems to be worth exploring. Based on the available evidence, partner-serving motivation is most likely to be associated with a higher level of empathic accuracy that enables the perceiver to better understand and meet the partner's needs.

Trait and State Motivation

The motivation to be accurate can stem from both dispositional, *trait-based motives* (ones derived from a person's traits or characteristic needs) and situational motives that are evoked as *state-based motives* in a specific context such as a conflict interaction (Ickes, 2011; Ickes & Hodges, 2013). Published research on motivation and empathic accuracy examines largely *state* influences on accuracy, especially those evoked in contexts created by experimental manipulations. Trait-based motives have also been assumed to contribute to empathic accuracy, but finding traits that consistently predict empathic accuracy has proved elusive (see Hodges et al., 2015).

Pickett et al. (2004) found that people with a greater need for social connectedness (i.e., a relatively stable, trait-based motivation to be accepted by others) performed better on a standard stimulus empathic accuracy task than people with a lower need for connectedness. However, in the same study, a manipulation designed to temporarily highlight a need to

belong resulted in *less* empathic accuracy. An important implication of this research is that trait-based motivation and state-based motivation can produce effects that go in different directions.

Another individual difference that motivates the perceiver's empathic inference making is attachment style. Although we previously mentioned that partners tend to be less accurate in relationship-threatening situations (Ickes & Simpson, 1997; 2001), individuals with an anxious attachment style display *greater* accuracy when inferring their partner's feelings and thoughts in relationship-threatening situations (e.g., discussing intimacy issues) (Dugosh, 2001; Simpson et al., 1999; Simpson et al., 2011). The explanation for this finding is that anxiously attached individuals have a strong motive to attend to and evaluate potential threats to their relationship because they fear being abandoned by their partners (Kobak & Sceery, 1988; Mikulincer & Shaver, 2003; Simpson, 1990). On the other hand, avoidantly attached individuals seem to be less motivated to know what their partner is thinking, and this is the case regardless of context (Izhaki-Cost & Shul, 2011; Rholes et al., 2007; Simpson et al., 1999; Simpson et al., 2011), presumably because they have a strong motive to avoid becoming too close and interdependent with their partner (Hazan & Shaver, 1987, 1994; Kobak & Sceery, 1988).

Collectively, these findings indicate that both stable dispositional and contextually specific motivation can be linked to empathic accuracy. However, increases in these two different kinds of motivation won't necessarily produce the same effect on empathic accuracy. Limited research has investigated these two kinds of motivations together, but it suggests that differential effects can occur (Pickett et al., 2004).

The Current Study: A Synthesis

The goal of the present study is to explore how multiple forms of motivation affect empathic accuracy in couples' conflict interactions, by examining them all in a single

investigation. The central research question of this work is whether relationship-serving, self-serving, and partner-serving motivation make differential contributions in predicting perceivers' empathic accuracy. To this end, we will not only measure these three kinds of motivation separately, but also attempt to experimentally induce the three kinds of motivation by manipulating the instructions given to the participants. In addition, when we measure these different forms of motivation, we will measure both trait (how motivated are participants generally?) and state (how motivated are they regarding a specific conflict topic?) for each. We hope that our results might offer new insights and potentially clarify previous inconsistent results linking motivation and empathic accuracy.

To address our research questions, a large-scale observational couples study was conducted. Its first stage consisted of a questionnaire session in which we assessed self-reported trait relationship-, self-, and partner-serving motivation. A later observational session included an adapted version of the dyadic interaction empathic accuracy paradigm (Ickes et al., 1990), which consisted of a videotaped interaction task in which members of couples talked about a difference of opinion, followed immediately by a video-review task that enabled us to measure their empathic accuracy. To capture state motivation, just before the interaction took place, we asked the participants to provide self-reports of their relationship-, self-, and partner-serving motivation with respect to the specific topic they were about to discuss.

The observational part of the study also contained an experimental manipulation in which we varied motivation as a between-couples factor. After the members had reported their state motivation, but just prior to their interaction about the difference of opinion, the couples were randomly assigned to one of the four conditions: the control condition, the relationship-serving motivation boost condition, the self-serving motivation boost condition, or the partner-serving motivation boost condition. Finally, shortly after the interaction, as a

manipulation check, we asked the participants to report on their relationship-, self-, and partner-serving motivation during the interaction they had just had.

The interaction task required the members of each couple to talk about a difference of opinion, which can be seen as a situation of noncorrespondence (Murray et al., 2006; Van Lange et al., 1997). During these interactions, two opposing opinions are present which make possible three different approaches that parallel the three different motivations: one can try to advance one's own opinion; one can try to search for a compromise in order to maintain a good relationship; or one can acquiesce to the opinion of one's partner.

Based on the available literature, we hypothesized that there would be a positive association between a perceiver's partner-serving motivation and empathic accuracy. Given the limited and inconsistent findings with regard to relationship- and self-serving motivations, we had no specific expectations about how these would affect empathic accuracy and therefore our examination of these motives and empathic accuracy was exploratory in nature. We also did not formulate any hypothesis about which of the three motivations would increase or decrease empathic accuracy the most, as this has never been investigated before, nor did we have any hypotheses about the difference between the state and trait measures of motivation—only that they both could potentially have an effect on empathic accuracy in couples' conflict interactions.

Method

Ethics Statement

This study was approved by the ethics committee of the Faculty of Psychology and Educational Sciences of Ghent University, Belgium.

Participants

A sample of 172 couples[1] was recruited through social media, and in the social networks of psychology students who were involved as research assistants in the study. Each couple met the following inclusion criteria: (1) involved in an intimate heterosexual relationship, (2) a relationship length of at least one year, (3) both partners at least 21 years old, and (4) adequate knowledge of the Dutch language. The couples had been together for an average of 11.40 years (*SD* = 11.85 years, range = 1- 49 years). The participants' average age was 35.78 years for the men (*SD* = 13.30 years, range = 21-78 years) and 34.12 years for the women (*SD* = 13.31 years, range = 21-73 years).[2]

Procedure

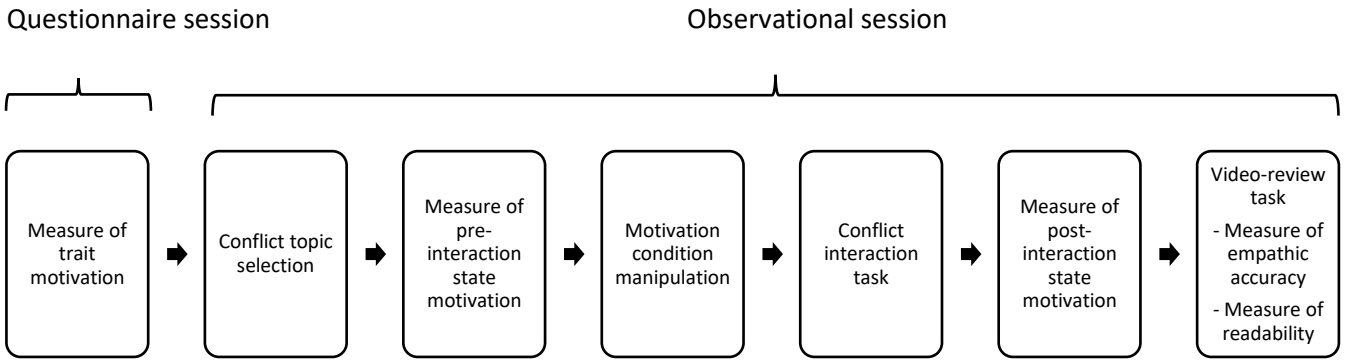
Upon providing their informed consent, both partners independently completed an online questionnaire at home, in which their trait motivation was assessed (described in further detail below). Subsequently, an appointment for the couple was scheduled for an observational session at the laboratory of the university. In this observational session, we used an adapted version of the dyadic interaction paradigm (DIP; Ickes et al., 1990), similar to that used in previous studies of empathic accuracy (e.g., Hinnekens et al., 2016; Simpson et al., 2003; Verhofstadt et al., 2016). A summary of the steps of the procedure can be found in Figure 1.

[1] Initially, the objective was to collect 40 couples per condition, which, according to a statistical expert, resulted in rather low power (e.g. a power of 70% to detect a difference of 2% in empathic accuracy between conditions).We sought to increase the power more by recruiting as many couples as possible, but were limited by the time span (one calendar year) of the data collection and practical constraints. We decided not to conduct post-hoc power analyses, because of the issues that exist concerning these analyses (Hoenig & Heisey, 2001; Levine & Ensom, 2001).

[2] To determine the gender of the participants, participants were given the options to self-identify as 'man', 'woman' or 'other' (with the possibility of specifying 'other'). None of the participants identified as 'other.'

Figure 1

Procedure and Measures



Conflict Topic Selection

At the laboratory, the partners were given a list of common conflict topics in intimate relationships (e.g., finances, affection, division of household tasks; Kurdek, 1994) and were asked separately to identify three topics on which they differed in their opinion and that were important to them. After a mutually agreed-upon topic was chosen[3], the two research assistants (grad students) asked the partners to briefly explain to each other and the research assistants the differences in their opinion concerning this topic, to make sure everyone was on the same page. The partners were then asked to individually complete the pre-interaction state motivation measure (described in more detail below), assessing their motivation in conversations with their partner about this specific topic.

Motivation Condition Manipulation

The partners in each couple were told they would each independently prepare for the upcoming discussion about the conflict topic with guidance from a research assistant—a step justified to participants by explaining that it would be difficult to launch into a discussion on these topics suddenly. In reality, the preparation consisted of questions and a brief statement

[3] When both partners only agreed on one topic, this topic was selected for the interaction task. When both partners agreed on two or three topics, the couple could choose one of these topics. When there was no overlap between the choices, the couple was left alone to decide the eventual topic of discussion.

from the research assistant that differed according to the condition the couple was randomly assigned to. There were four conditions in total: the *control* condition (*n* = 42 couples), the *relationship-serving motivation* boost condition (*n* = 44 couples), the *self-serving motivation* boost condition (*n* = 43 couples), and the *partner-serving motivation* boost condition (*n* = 43 couples)[4].

In the *control* condition, the partners were asked some basic, rather neutral questions (see Appendix) about the conflict topic they selected (e.g., How often do you have a conversation about this topic? Who usually initiates a conversation about this topic? How does a conversation about this topic usually end?). In the *relationship-serving motivation* condition, the partners were asked questions that were intended to induce the motivation to reach the best possible outcome for the relationship (e.g., What would be a positive outcome for your relationship? How could you try to reach a compromise together with your partner to the benefit of the relationship in the following conversation?). In addition, a research assistant gave a standardized message that stressed the need to focus on the relationship's well-being (see Appendix). In the *self-serving motivation* condition, the questions and the message (see Appendix) focused on the participant's own well-being (e.g., What would be a positive outcome for yourself? Could you tell me what you need and desire? How could you convince your partner of your opinion in the following conversation?). Finally, in the *partner-serving motivation condition*, the questions and the message (see Appendix) were the opposite of those in the self-serving motivation condition, with the objective of increasing the motivation to maximize the well-being for their partner (e.g., What would be a positive outcome for your partner? Could you tell me what your partner needs and desires? How could you go along with your partner's opinion in the following conversation?).

[4] The objective was to have a perfectly balanced design, but due to COVID-19, the study had to be stopped earlier than expected and could not be resumed.

Conflict Interaction Task

Immediately after the manipulation of the couples' motivation, the partners were brought back together and led into a simulated living room that was equipped so that the interaction could be videotaped with the partners' prior knowledge and consent. The partners then discussed their chosen conflict topic for 10 minutes. As soon as the interaction task was completed, the partners filled out the post-interaction state motivation measure, assessing their reported motivation during the conflict interaction. This measure was used as a manipulation check for the experimental motivation condition manipulation.

Video-review Task

In line with Ickes' empathic accuracy paradigm, after completing the conflict interaction task, the partners independently watched the video of their interaction. With the aid of a specialized software program (Berlamont & Verhofstadt, 2019), the video was paused every 37.5 seconds, resulting in 16 stop points. At each of these stop points, each partner was asked to answer several questions, including (a) what they were thinking or feeling during the previous segment; and (b) their best inference about what their partner was thinking or feeling during that same segment. The couples were then fully debriefed and received a monetary compensation of €40 for completing both the questionnaire and the observational session.

Measures

Relationship-, Self-, and Partner-serving Motivation

As mentioned above, the partners' motivation was assessed at three different points during the study: during the questionnaire session (trait motivation), immediately before the conflict interaction (pre-interaction state motivation), and right after the conflict interaction (post-interaction state motivation) – a measure that we used as our manipulation check. At each point, the same 15 scale items were used, with slightly varied wording that corresponded to the three measurement points. The items were specifically constructed for this study but

were based on existing measures that assess relationship-, self-, and partner-serving motivation.[5] The question stem that prefaced each of the items varied depending on whether the scale was intended to measure dispositional trait motivation or pre- or post-interaction state motivation.

Each motivation item on the scale was rated on a 7-point Likert scale that ranged from 1 = *not at all* to 7 = *extremely*. Five items assessed *relationship-serving* motivation, namely: "search a compromise to the benefit of our relationship"; "focus on the needs of our relationship"; "give in to the benefit of our relationship"; "increase the well-being of the relationship"; and "achieve a positive outcome for our relationship." Another five items assessed *self-serving motivation*, namely: "convince my partner of my opinion"; "focus on my needs and desires"; "not to give in"; "increase my own well-being"; and "achieve a positive outcome for myself." Finally, a last subscale measured *partner-serving motivation*, which consisted of the following items: "adopt the opinion of my partner"; "focus on the needs and desires of my partner"; "give in to the benefit of my partner"; "increase the well-being of my partner", and "achieve a positive outcome for my partner."

Because these were newly-developed measures, we decided to conduct exploratory factor analyses to examine whether the items grouped together as we assumed and to decide if any items should be removed before moving on to the analyses with these measures. Exploratory factor analyses with principal axis factoring (see Supplementary Materials for details) supported the intended 3-factor solution for both the trait and the state motivation scales (with items loading highly on the motivation they were meant to assess).[6] Only one

[5] Measures of exchange and communal orientation (Clark et al., 1987), self-image and compassionate goals (Crocker & Canevello, 2008), selfish and altruistic motivations (Feeney & Collins, 2003), self-, relationship- and partner-oriented motivation (Girme et al., 2014) and willingness to sacrifice (Van Lange et al., 1997).

[6] The factor analyses were conducted with oblimin rotation, which allows the factors to be correlated (Field, 2009). Inspection of the intercorrelations between the factors showed that relationship-serving and partner-serving motivation were moderately correlated (see Supplementary Materials). Following the guidelines of Costello and Osborne (2005), we decided to use the scree test to decide upon the number of factors to extract. Based on a graphical inspection of the eigenvalues in the scree plot, we extracted three factors for both trait and state motivation measures. For post-interaction state motivation, however, the point of the "elbow" is debatable

item, namely "give in to the benefit of our relationship" loaded on the partner-serving motivation factor instead of the relationship-serving motivation factor for each of the measures, a finding which led us to decide to eliminate this item from further analyses.

Trait Motivation. When measuring trait (dispositional) motivation, the motivation items described above began with the phrase: "In conversations with my partner, I *usually* think it's important to…". The internal consistency of the final three subscales was good (relationship-serving motivation (4 items): α_{men} = .81, α_{women} = .82; self-serving motivation (5 items): α_{men} = .71, α_{women} = .72; partner-serving motivation (5 items): α_{men} = .75, α_{women} = .79).

Pre-interaction State Motivation. Before the interaction and before the motivation condition was manipulated, the participants completed items similar to those on the trait motivation measure. However, in order to capture the participants' *state* motivation regarding the *impending* discussion of this particular issue, this time each item started with: "In conversations with my partner *about this topic*, I think it's important to …". The internal consistency of these measures was acceptable to good (relationship-serving motivation: α_{men} = .81, α_{women} = .88; self-serving motivation: α_{men} = .67, α_{women} = .74; partner-serving motivation: α_{men} = .73, α_{women} = .78).

Post-interaction State Motivation. After their interaction ended, the participants completed a second state measure of motivation, this time to capture their self-reports of their motivation *while* discussing the contentious relationship issue. Each item now began with the

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and could also suggest a 4-factor solution. However, we decided to keep the 3-factor solution, (1) because of the results of an automated scree test (Wilderjans et al., 2013) that indicated three factors should be extracted for each inspected measure, (2) because the factor solutions with three factors were consistent and easily interpretable for each of the measures and (3) were in line with our theoretical expectations and manipulated conditions, and (4) because parallel analyses also showed that three factors should be extracted for each of the measures (see Supplementary Materials). Finally, we would like to note that principal components analyses yielded latent constructs that are almost identical in interpretation to the analysis results reported here, and thus would yield the same sumscores (see below and see Supplementary Materials).

phrase: "*During the conversation* with my partner, I *thought it was* important to …". The internal consistency of these measures was good (relationship-serving motivation: α_{men} = .86, α_{women} = .89; self-serving motivation: α_{men} = .78, α_{women} = .85; partner-serving motivation: α_{men} = .79, α_{women} = .82).

Empathic Accuracy

At each stop point during the video-review task, each partner was asked to write down what he/she had felt and thought *during the preceding time segment* (37.5 seconds) of the interaction, by completing the open-ended phrases "I felt…" and "I thought…". Next, they were instructed to infer and write down the presumed feelings and thoughts of the partner during that same segment of the interaction, by completing the open-ended phrases "My partner felt…" and "My partner thought…". The instructions clearly stated that the questions applied to the *entire* 37.5s segment of the interaction they had just watched. The software allowed participants to re-observe this entire segment when needed.

Later, four independent judges rated the degree of similarity between the actual feelings and thoughts of one (target) partner and the corresponding inferred feelings and thoughts reported by the other (perceiver) partner at each of the 16 stop points, using Lewis et al.'s (2012) slight modification of the coding system originally developed by Ickes et al. (1990). The main difference between these systems is that Ickes et al. (1990) used a 3-point scale, whereas Lewis et al. (2012) used a 4-point scale that allows more variation in the "middle range" of rated empathic accuracy scores. The scale points are 0 = *the inferred content and the actual content are not the same;* 1 = *the inferred content is somewhat correct, but something notable is missing or incorrect*; 2 = *the inferred content is mostly correct, but some small element is missing or is incorrect;* and 3 = *the inferred content captures the gist of the actual content – all elements of the feeling/thought are there, and nothing is incorrect.*

Empathic accuracy scores for feelings and thoughts were computed separately as a simple percentage measure of the number of "accuracy points" earned, divided by the total number of "accuracy points" available and multiplied by one hundred.[7] Given the high interrater reliability for empathic accuracy for feelings (ICC_{Men} = .91; ICC_{Women} = .90) and thoughts (ICC_{Men} = .85; ICC_{Women} = .87)[8], the scores were averaged across the four raters.

Data-analytic Strategy

To provide an answer to our research question, both correlational and multilevel analyses were conducted within SPSS 28.0. With regard to the correlational analyses, we computed Pearson correlations coefficients between all the key variables of the study. These correlations not only indicate whether relationship-, self-, and partner-serving motivation predict empathic accuracy, but also reveal how the measures of relationship-, self,- and partner-serving motivation at different time points are associated with each other.

Subsequently, three main analyses were conducted. First, we examined whether the manipulation of motivation had an effect on empathic accuracy. Prior to conducting this analysis, however, we checked whether our manipulation itself was effective. Second, we investigated whether trait motivation (relationship-, self-, and partner-serving) predicted empathic accuracy beyond the effect of the manipulation. Third, we examined whether pre-interaction state motivation (i.e. motivation regarding the specific conflict topic) predicted empathic accuracy, also beyond the effect of the manipulation.

In each of these analyses, we fitted multilevel models for dyadic data which take into account that individual partners are nested within a couple (Kenny et al., 2006, Chapter 4). To examine the effect of condition in each of these analyses, three dummy-coded variables were

[7] The theoretical range of this percentage-correct accuracy measure was 0 (*none of the possible accuracy points were earned*) to 100 (*all of the possible accuracy points were earned*).

[8] The statistics reported here were two-way mixed, absolute agreement, average-measures ICCs (McGraw & Wong, 1996).

created, representing each experimental condition ("Relationship", "Self", and "Partner"), with the control condition serving as the reference category. Trait and pre-interaction state motivation measures were grand mean centered when included as predictors in the models.

Because we are working with dyadic partners that are distinguishable by gender, we first fitted models in which the effects of interest could differ across gender. Specifically, we estimated two-intercept models, which provide estimates of the effects for men and women separately (for details see Kenny et al., 2006). If the BIC/AIC[9] values were lower for the models without gender, we reported the analyses pooled across gender. Furthermore, we also allowed for different error variances for men and women by specifying a *heterogeneous* compound symmetry structure.

Additional post hoc pairwise comparison tests (with Bonferroni correction for multiple testing) were conducted to compare the conditions to *each other* (and not only to the control condition) in the analyses with regard to the manipulation check and the effect of condition on empathic accuracy.

With regard to effect sizes, there is no commonly agreed upon method for calculating these for multilevel models. However, following the recommendations of Kenny et al. (2006), we compared the residual variance of the full models to that of the empty models (models that do not include predictor variables) and calculated a pseudo R^2 (for details see Kenny et al., 2006), which provides information about the size of the effect. The data that support the findings of this study are available from the corresponding author upon request.

Results

[9] The Bayesian Information Criterion (BIC) and the Akaike Information Criterion (AIC) are goodness-of-fit measures that are corrected for model complexity (Field, 2009). Models with smaller BIC and AIC values provide a better fit-complexity balance.

Descriptive Statistics

Table 1 includes the means and standard deviations of the key variables, along with paired sample *t*-tests to test for possible differences in these key variables between men and women. First, it is notable that the average empathic accuracy scores for both feelings and thoughts are rather low, which is in line with previous studies using the dyadic interaction paradigm with couples (e.g., Hinnekens et al., 2016; Simpson et al., 2003; Verhofstadt et al., 2016). Furthermore, the analyses revealed no significant gender differences in the average empathic accuracy scores for feelings or thoughts. With regard to trait motivation, the analyses showed that, on average, men reported less *self-serving motivation* and more *partner-serving motivation* than women did. These gender differences were also found for pre- and post-interaction state motivation. When it came to *relationship-serving motivation*, men reported significantly less trait motivation than women, but this effect was not significant for pre- and post-interaction state motivation.

Correlations

We also computed Pearson correlation coefficients between all the key variables measured in this study (see Table A in the Appendix). A number of these findings are worthy of mention. First, the correlations between the motivation measures and empathic accuracy provide some preliminary insights regarding our research question. These correlations revealed that *relationship-serving motivation* was in some cases positively associated with empathic accuracy for feelings and thoughts ($.16 < r < .21$). In particular, the women's empathic accuracy for thoughts (but not for feelings) was significantly related to all three measures (trait, pre-interaction, post-interaction) of relationship-serving motivation. For men, only the pre-interaction relationship-serving motivation was positively associated with empathic accuracy for feelings and thoughts. Neither trait, nor state self-serving motivation

and partner-serving motivation were associated with empathic accuracy for feelings or thoughts in both men and women.

Second, we checked whether the different kinds of motivations were associated with each other and found positive associations between *partner-serving motivation* and *relationship-serving motivation* (measured at the same point in time) that were quite strong for men ($.59 < r < .60$), but weaker for women ($.26 < r < .44$).

Third, the correlations between the measures at different points in time were examined. As would be expected, the trait motivation measures were less associated with the pre- and post-interaction state motivation measures ($.33 < r < .59$) than the pre- and post-interaction state motivation measures were with each other ($.70 < r < .80$).

Table 1

Descriptive Statistics for Key Variables and Results of Paired Sample t-tests Comparing Men and Women.

	Men			Women				
	M	*SD*	Range	*M*	*SD*	Range	*t*	*d*
Empathic accuracy								
Feelings	19.13	10.11	0.52-52.08	19.54	10.15	1.04-55.21	-0.49	-0.04
Thoughts	13.90	7.61	0.52-34.90	14.52	8.65	0.00-36.46	-0.90	-0.07
Trait motivation								
Relationship-serving motivation	5.65	0.90	2.25-7.00	6.02	0.84	3.00-7.00	-4.15***	-0.32
Self-serving motivation	3.47	0.96	1.00-6.00	3.76	1.05	1.00-6.20	-2.75**	-0.21
Partner-serving motivation	4.51	0.89	2.00-7.00	4.22	1.01	1.00-6.60	2.95**	0.23
Pre-interaction state motivation								
Relationship-serving motivation	5.58	0.99	1.50-7.00	5.76	1.13	1.00-7.00	-1.93	-0.15

Self-serving motivation	3.67	0.95	1.00-6.20	4.06	1.04	1.60-7.00	-4.11***	-0.32
Partner-serving motivation	4.33	0.90	1.40-6.40	4.01	0.97	1.40-6.00	3.40**	0.26
Post-interaction state motivation								
Relationship-serving motivation	5.66	1.04	1.50-7.00	5.78	1.08	1.00-7.00	-1.29	-0.10
Self-serving motivation	3.66	1.12	1.00-6.20	4.07	1.26	1.00-7.00	-3.74***	-0.29
Partner-serving motivation	4.52	0.99	1.40-6.60	4.17	1.02	1.00-6.60	3.54**	0.27

Note. *p <.05 **p < .01 ***p< .001.

Effectiveness of Motivation Condition Manipulation

We assessed the effectiveness of the manipulated motivation conditions by conducting multilevel analyses for dyadic data, as mentioned before (Kenny et al., 2006). The question that we intended to answer here was: "Did the motivation manipulation increase the targeted motivation more than in the control condition and the other conditions?" To this end, we tested models that included the post-manipulation/interaction state motivation measure as the outcome variable and the motivation condition as the predictor, while controlling for the pre-manipulation/interaction state motivation measure.[10] To examine the effect of condition, three dummy-coded variables were created, representing each experimental condition, with the control condition serving as the reference category. Additional post hoc pairwise comparison tests (with Bonferroni correction for multiple testing, adjusted $\alpha = .008$) were conducted to compare the conditions to each other. Because models without gender had lower BIC/AIC values, we report the analyses pooled across gender.[11] Table 2 represents the results of the

[10] We also conducted multilevel analyses with the difference score between the post-manipulation measure of state motivation and the pre-manipulation measure of state motivation as the outcome variable and the condition as the predictor. These analyses revealed similar results, although we also found a significant positive effect of the partner-serving motivation condition on relationship-serving motivation (b = 0.23, $SE(b)$ = 0.11, p = .04, 95% CI = [0.01 – 0.45]), as compared to the control. This means that partners in the partner-serving motivation condition showed a significant increase in their motivation for the relationship.

[11] For relationship-serving motivation: BIC = 720.47 and AIC = 709.03 without gender, BIC = 726.99 and AIC = 715.59 with gender. For self-serving motivation: BIC = 828.37 and AIC = 816.93 without gender, BIC = 835.43

post hoc analyses in a succinct manner (see Supplementary Materials for the full multilevel models).

Table 2

Results of the Post Hoc Analyses Comparing Post-Interaction State Motivation between Conditions, Controlling for Pre-Interaction State Motivation.

	Motivation condition							
	Control		Relationship		Self		Partner	
Post-interaction state motivation	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Relationship-serving motivation	5.62[a]	0.08	5.76[a]	0.08	5.70[a]	0.08	5.81[a]	0.08
Self-serving motivation	3.68[a]	0.09	3.82[a]	0.09	4.26[b]	0.09	3.66[a]	0.09
Partner-serving motivation	4.26[a]	0.07	4.36[b]	0.07	4.17[a]	0.07	4.61[b]	0.07

Note. Means in the same row that do not share superscripts are significantly different at *p* levels stated in text.

The results of these analyses revealed that the self-serving motivation manipulation and the partner-serving motivation manipulation had the intended effects, but that the relationship-serving motivation manipulation did not. First, and as expected, the participants in the self-serving motivation condition were significantly more motivated for oneself than those in the control condition ($p < .001$). Furthermore, the results of the post hoc pairwise comparison tests showed that the participants in the self-serving motivation condition were also more motivated for oneself than those in the relationship-serving motivation condition ($p < .01$) or the partner-serving motivation condition ($p < .001$).[12] Second, and also as expected,

and AIC = 824.03 with gender. For partner-serving motivation: BIC = 738.76 and AIC = 727.32 without gender, BIC = 744.74, AIC = 733.34 with gender.

[12] The same results were found when using the less strict LSD correction method.

the participants in the partner-serving motivation condition demonstrated higher levels of motivation for their partner's well-being than the participants in the control condition ($p <$ .01) and in the self-serving motivation condition ($p < .001$). Interestingly, there was no significant difference in post-interaction partner-serving motivation between the partner-serving motivation condition and the relationship-serving motivation condition ($p = .12$).[13]

Third, and contrary to expectation, the relationship-serving motivation manipulation did not have the intended effect on relationship-serving motivation: There were no significant differences in reported post-interaction motivation for the relationship condition compared to the control condition nor to any other condition (all p's > .51).[12]

Notably, our analysis revealed substantial positive associations between each pre-interaction state motivation measure and its corresponding post-interaction motivation measure (e.g., pre-interaction state relationship-serving motivation was significantly associated with post-interaction relationship-serving motivation: $b = 0.77$, $p < .001$; for pre- and post-interaction self-serving motivation: $b = 0.88$, $p < .001$; for pre- and post-interaction partner-serving motivation: $b = 0.78$, $p < .001$; see Supplementary Materials for the full models). These findings are consistent with the high correlations found between the pre-and post-interaction measures (see Appendix).

Taken together, our results suggest that the motivation condition manipulation was somewhat effective in altering participants' reported self and partner-serving motivation, but not in altering their relationship-serving motivation, a point that must be taken into account when interpreting the results below.

Manipulated Motivation and Empathic Accuracy

[13] When using the LSD correction method, we did find that participants in the partner-serving motivation condition demonstrated significantly higher levels of motivation for their partner's well-being than the participants in the relationship-serving motivation condition ($p = .02$).

Do experimental manipulations of motivation affect empathic accuracy for feelings and thoughts? To answer this question, we compared the experimental conditions to the control condition, once again using multilevel models to analyze our dyadic data. Two models were fitted to the data: one for empathic accuracy for feelings and one for thoughts. Three dummy-coded variables ("Relationship", "Self", "Partner") were again used as predictors. As before, our preliminary analyses included the partners' gender, which in this case, provided a better fit-complexity balance (based on a comparison of the BIC/AIC values).[14] Therefore, we present the results of two-intercept models (Table 3), which provide estimates of the effects for men and women separately (Kenny et al., 2006).[15]

The results showed that, contrary to our expectation, the men in the partner-serving motivation condition had lower levels of empathic accuracy for their female partner's feelings (b = -5.17, $p < .05$) and thoughts (b = -3.90, $p < .05$) than the men in the control condition. However, this effect was not significant for women. Bonferroni corrected post hoc pairwise tests further revealed that the men in the partner-serving motivation condition were less accurate in inferring their partner's *thoughts* (M = 10.93, SD = 1.14) than were the men in the relationship-serving motivation condition (M = 15.73, SD = 1.12, p = .02).[16] No other significant effect of condition on empathic accuracy was found (p's > .17). To conclude, the partner-serving motivation induction had an unexpected negative impact on empathic accuracy, but only for the men. The residual or error variance in the full models, however,

[14] For empathic accuracy for feelings: BIC = 2537.74 and AIC = 2526.25 without gender, BIC = 2520.06 and AIC = 2508.61 with gender. For empathic accuracy for thoughts: BIC = 2394.54 and AIC = 2383.06 without gender, BIC = 2370.51 and AIC = 2359.06 with gender.

[15] We also conducted analyses that included *target* (i.e., partner) *readability* (e.g., see Marangoni et al., 1995). Readability is an important control variable in the literature on motivation and empathic accuracy, because the influence of a perceiver's motivation on empathic accuracy depends on the readability of the target (e.g., Thomas & Maio, 2008). When a target is hard to read, even a highly motivated perceiver finds it difficult to achieve a high level of empathic accuracy. Our analyses revealed only a positive main effect of the target readability, with no interaction effects; see Supplementary Materials for details.

[16] The same results were found when using the LSD correction method.

decreased only slightly compared to the empty models, which is in line with the low pseudo R^2's.

Thus, we found minimal effects of our motivation manipulation on participants' empathic accuracy, with only the partner-serving motivation condition having any effect—and even then, this was only for men. To provide a more complete view of the data, however, we then conducted further analyses using our trait and state measures of motivation, inspired in part because our initial descriptive statistics (see Table A in the Appendix) turned up a number of correlations between these measures of relationship-serving motivation and empathic accuracy, particularly for women.

Table 3

Results for the Models Predicting Empathic Accuracy for Feelings and Thoughts from the Condition

	b	*SE(b)*	95% CI
Model 1 (EA Feelings)			
Men	21.55***	1.55	[18.50 – 24.61]
Women	18.86***	1.56	[15.77 – 21.94]
Relationship*Men[17]	-2.98	2.16	[-7.25 – 1.29]
Self*Men	-1.48	2.17	[-5.77 – 2.81]
Partner*Men	-5.17*	2.17	[-9.47 – -0.88]
Relationship*Women	2.68	2.18	[-1.63 – 6.99]
Self*Women	1.47	2.19	[-2.86 – 5.80]
Partner*Women	-1.49	2.19	[-5.82 – 2.85]

[17] In a two-intercept model, this term represents the main effect of the relationship-serving motivation condition on empathic accuracy for men. The other terms in this model can be interpreted the same way.

Model 2 (EA Thoughts)			
Men	14.84***	1.15	[12.57 – 17.11]
Women	14.84***	1.34	[12.20 – 17.48]
Relationship*Men	0.89	1.61	[-2.29 – 4.07]
Self*Men	-0.75	1.62	[-3.95 – 2.44]
Partner*Men	-3.90*	1.62	[-7.10 – -0.71]
Relationship*Women	-0.23	1.87	[-3.92 – 3.46]
Self*Women	-1.98	1.88	[-5.68 – 1.73]
Partner*Women	0.95	1.88	[-2.76 – 4.66]

	Empty Model		Full Model		
	Dyad covariance	Error variance	Dyad covariance	Error variance	Pseudo R^2
Model 1	43.12	59.40	42.75	58.62	0.01
Model 2	25.12	41.21	26.47	38.82	0.02

Note. *p <.05 **p < .01 ***p < .001

Trait Motivation and Empathic Accuracy

We first tested whether the perceiver's *trait* (relationship-, self-, and partner-serving) motivation predicted the perceiver's empathic accuracy for their partner's feelings and thoughts beyond the effects of our manipulated condition variable, by adding the three kinds of trait motivations (grand mean-centered) on top of the dummy variables of condition as predictors to the model. Based on a comparison of the BIC/AIC values, we fitted models with

perceiver gender included.[18] The results for this model showed that none of the trait motivations (not relationship-, self-, nor partner-serving) predicted a perceiver's empathic accuracy for their partner's feelings or thoughts (all *p*'s > .07, see Table 4). As can be expected, the residual variance was only slightly lower in the full models and almost no variance was explained by the predictors.

Table 4

Results for the Models Predicting Empathic Accuracy for Feelings and Thoughts from Condition and Perceiver's Trait Motivation

	b	*SE(b)*	95% CI
Model 3 (EA for Feelings)			
Men	21.75***	1.59	[18.61 – 24.89]
Women	18.71***	1.60	[15.55 – 21.87]
Relationship*Men	-3.07	2.24	[-7.49 – 1.35]
Self*Men	-1.54	2.23	[-5.94 – 2.85]
Partner*Men	-5.23*	2.22	[-9.62 – -0.84]
Relationship*Women	2.78	2.19	[-1.54 – 7.11]
Self*Women	1.41	2.22	[-2.96 – 5.78]
Partner* Women	-1.47	2.20	[-5.81 – 2.88]
Relationship-serving trait motivation*Men	0.72	0.97	[-1.19 – 2.63]
Self-serving trait motivation*Men	-0.16	0.75	[-1.64 – 1.32]
Partner-serving trait motivation*Men	-0.26	1.01	[-2.26 – 1.74]
Relationship-serving trait motivation*Women	0.56	0.86	[-1.14 – 2.27]

[18] For empathic accuracy for feelings: BIC = 2534.28 and AIC = 2522.82 without gender, BIC = 2508.81 and AIC = 2497.41 with gender. For empathic accuracy for thoughts: BIC = 2388.82 and AIC = 2377.36 without gender, BIC = 2357.24 and AIC = 2345.84 with gender.

Self-serving trait motivation*Women	0.59	0.72	[-.83 – 2.01]
Partner-serving trait motivation*Women	0.42	0.77	[-1.10 – 1.95]
Model 4 (EA for Thoughts)			
Men	15.00***	1.17	[12.68 – 17.32]
Women	14.69***	1.36	[12.01 – 17.38]
Relationship*Men	0.24	1.65	[-3.02 – 3.51]
Self*Men	-1.15	1.64	[-4.40 – 2.09]
Partner*Men	-4.27*	1.64	[-7.51 – -1.03]
Relationship*Women	-.26	1.86	[-3.94 – 3.42]
Self*Women	-2.08	1.88	[-5.79 – 1.64]
Partner* Women	0.99	1.87	[-2.70 – 4.69]
Relationship-serving trait motivation*Men	0.22	0.72	[-1.20 – 1.64]
Self-serving trait motivation*Men	-0.86	0.56	[-1.97 – 0.24]
Partner-serving trait motivation*Men	0.79	0.75	[-0.70 – 2.28]
Relationship-serving trait motivation*Women	1.20	0.74	[-0.26 – 2.66]
Self-serving trait motivation*Women	-0.07	0.61	[-1.28 – 1.14]
Partner-serving trait motivation*Women	0.33	0.66	[-0.98 – 1.64]

	Empty Model		Full Model		
	Dyad covariance	Error variance	Dyad covariance	Error variance	Pseudo R^2
Model 3	43.12	59.40	44.14	58.58	0.00
Model 4	25.12	41.21	26.72	38.35	0.02

Note. *p <.05 **p < .01 ***p < .001

Pre-interaction State Motivation and Empathic Accuracy

Our next analyses examined if and how the perceiver's pre-interaction *state* motivation (motivation regarding the specific conflict topic) predicted empathic accuracy for their partner's feelings and thoughts, while controlling for the effect of condition (using analyses that parallel those above for trait motivation). Again, models with perceiver gender included provided a considerably better fit-complexity balance.[19] These analyses (see Table 5) revealed a significant positive effect of relationship-serving state motivation on empathic accuracy for thoughts, but only for women ($b = 2.27$, $p < .001$). The residual or error variance in the full models, however, decreased only slightly compared to the empty models, which is in line with the low pseudo R^2's. We do want to note that the effects of relationship-serving state motivation on empathic accuracy for feelings for women and on empathic accuracy for both feelings and thoughts for men were marginally significant. We therefore also examined models where we only allowed gender to interact with condition, but not with state motivation. The results showed that relationship-serving state motivation was significantly positively associated with empathic accuracy for feelings and thoughts (see Table B in the Appendix). These models' BIC/AIC values were also only a bit higher than the models reported here (< 7 units), meaning that these models provided a similar fit-complexity balance and thus that the evidence that the effect of relationship-serving state motivation differs across gender is weak only.[20]

Table 5

Results for the Models Predicting Empathic Accuracy for Feelings and Thoughts from the Condition and the Perceiver's Pre-Interaction State Motivation

[19] For empathic accuracy for feelings: BIC = 2490.21 and AIC = 2478.79 without gender, BIC = 2465.30 and AIC = 2453.94 with gender. For empathic accuracy for thoughts: BIC = 2350.72 and AIC = 2339.29 without gender, BIC = 2319.39 and AIC = 2308.03 with gender.

[20] For empathic accuracy for feelings: BIC: 2471.79 and AIC: 2460.41. For empathic accuracy for thoughts: BIC: 2326.29 en AIC: 2314.90.

	b	*SE(b)*	95% CI
Model 5 (EA for Feelings)			
Men	21.68***	1.50	[18.72 – 24.63]
Women	18.61***	1.57	[15.51 – 21.71]
Relationship*Men	-3.00	2.16	[-7.25 – 1.26]
Self*Men	-2.03	2.12	[-6.21 – 2.15]
Partner*Men	-5.18*	2.13	[-9.39 – -0.97]
Relationship*Women	2.73	2.15	[-1.52 – 6.98]
Self*Women	1.05	2.18	[-3.24 – 5.35]
Partner* Women	-1.22	2.18	[-5.53 – 3.08]
Relationship-serving state motivation*Men	1.47^{+}	0.89	[-0.28 – 3.23]
Self-serving state motivation*Men	0.48	0.77	[-1.03 – 2.00]
Partner-serving state motivation*Men	0.18	1.00	[-1.79 – 2.15]
Relationship-serving state motivation*Women	1.23^{+}	0.71	[-0.16 – 2.62]
Self-serving state motivation*Women	-0.20	0.70	[-1.58 – 1.18]
Partner-serving state motivation*Women	-0.03	0.82	[-1.64 – 1.58]
Model 6 (EA for Thoughts)			
Men	14.96***	1.15	[12.68 – 17.24]
Women	14.42***	1.32	[11.81 – 17.03]
Relationship*Men	0.66	1.66	[-2.61 – 3.94]
Self*Men	-0.73	1.63	[-3.95 – 2.50]
Partner*Men	-3.94*	1.64	[-7.18 – -0.69]
Relationship*Women	-0.30	1.81	[-3.88 – 3.28]

Self*Women	-1.89	1.83	[-5.51 – 1.73]
Partner* Women	1.30	1.84	[-2.33 – 4.93]
Relationship-serving state motivation*Men	1.32^{+}	0.67	[-0.01 – 2.65]
Self-serving state motivation*Men	-0.09	0.58	[-1.24 – 1.06]
Partner-serving state motivation*Men	-0.10	0.76	[-1.60 – 1.39]
Relationship-serving state motivation*Women	2.27***	0.59	[1.12 – 3.43]
Self-serving state motivation*Women	-0.76	0.58	[-1.91 – 0.38]
Partner-serving state motivation*Women	-1.28^{+}	0.68	[-2.61 – 0.06]

	Empty Model		Full Model		
	Dyad covariance	Error variance	Dyad covariance	Error variance	Pseudo R^2
Model 5	43.12	59.40	36.49	59.54	0.06
Model 6	25.12	41.21	26.21	36.69	0.05

Note. $^{+}p < .10$ $*p < .05$ $**p < .01$ $***p < .001$

Discussion

This study examined whether various forms of motivation could help predict empathic accuracy in heterosexual couples' conflict interactions. We covered a wide spectrum of motivation variables, including manipulations of motivation, overall trait measures of motivation, and state measures of motivation tied to a conversation about a specific issue. Furthermore, crossing these three categories of motivation, we addressed motivation that was directed at serving the relationship, the self, and the partner. Our results revealed that some of these forms of motivation are more relevant to achieving empathic accuracy in a relationship than others. None of the perceivers' trait motivations (relationship-, self-, partner-serving) predicted their empathic accuracy, but our motivation manipulations and the participants'

level of state motivation tied to a particular conversation about a specific contentious issue both had some effect, although sometimes in unexpected directions.

One of our results supported the intuitive idea that greater motivation should improve empathic accuracy: Higher relationship-serving state motivation predicted more empathic accuracy for thoughts in women. This was found in both the correlational analysis as well as in the multilevel analysis. Although we found clearly significant effects only for women and only for empathic accuracy for thoughts, it is nevertheless worth noting that relationship-serving state motivation had marginally significant effects on empathic accuracy for both feelings and thoughts for both genders. In addition, the correlational analysis also showed a positive association of pre-interaction relationship-serving state motivation with empathic accuracy for feelings and thoughts for men. Furthermore, in a simpler model that did not allow the effects of state motivation to differ across gender but did provide a similar fit-complexity balance, we found *significant* positive effects of relationship-serving state motivation on both empathic accuracy for feelings and thoughts. To conclude, we believe that the finding of a positive association between relationship-serving motivation and empathic accuracy for thoughts for women can probably be extended to empathic accuracy for feelings and men, but that our sample size was too small to actually show this. This finding, that relationship-serving motivation around a particular relationship issue is most likely associated with more empathic accuracy, is consistent with the results of studies suggesting that the motivation to maintain a relationship leads to more empathic accuracy (Hinnekens et al. 2018; Stinson & Ickes, 1992; Thomas & Fletcher, 2003).

On the other hand, the general trend of this finding neither supports, nor conclusively rules out, the possibility that relationship-serving motivation can also elicit empathic *in*accuracy when accurate inferences may uncover relationship-threatening thoughts and feelings (Ickes & Simpson, 1997, 2001). The fact that there was no evidence of greater

relationship-serving state motivation leading to greater inaccuracy in the current study may be explained by the fact that the conflict interactions in this study were in general not so severe or relationship-threatening, as both partners reported experiencing a lot of positive affect (Berlamont et al., 2022). It could also be that the couples in this study, despite having to discuss a potentially threatening issue, still felt secure enough in their relationships that they were not motivated to avoid accurately seeing their partner's point of view. Interestingly, our results are consistent with those reported by Hinnekens et al. (2018), which failed to find evidence for motivated inaccuracy for partner thoughts and feelings with a higher measured threat potential, suggesting that motivated inaccuracy may either be an unreliable effect or one that applies in very limited circumstances.

In contrast to these results for the partners' reported *state* relationship-serving motivation just prior to discussing a contentious issue, when we further tried to *manipulate* relationship-serving motivation, we not only failed to change participants' relationship motivation relative to the other conditions, but we also found no effect of the manipulation on empathic accuracy. The manipulation may have been ineffective due to a ceiling effect: Partners in this study were already highly motivated to achieve the best outcome for their relationship prior to the interaction (see Descriptive Statistics in Table 1). Despite these considerations, our findings are consistent with the idea that the motivation to achieve the best outcome for the relationship is important for mutual understanding and consistent with the current assumptions of couple therapy.

The most surprising finding was that partner-serving motivation, when experimentally manipulated had a *negative* effect on empathic accuracy for men, whereas we had hypothesized there would be a positive association between a perceiver's partner-serving motivation and his or her empathic accuracy. It is important to note that our *manipulation* of partner-serving motivation successfully increased the participants' reported partner-serving

motivation, but then subsequently lowered empathic accuracy for the men's inferences about their female partners' thoughts and feelings.

A possible explanation for these counter-intuitive findings is that increased partner-serving motivation might have caused a man to attend to the wrong cues being emitted by his partner, thereby hurting accuracy rather than improving it (Hall et al., 2009; Smith et al., 2011). Although one way of achieving accuracy is through directly analyzing one's partner's verbal and nonverbal cues, another indirect pathway involves more attention to the *self*. Specifically, this pathway operates by having a mental state similar to the partner's and (correctly) assuming that this state is similar to the partner's. This pathway, often referred to as *projection* (see Nickerson et al., 2009) is commonly used in the context of relationship conflict (Sened et al., 2017). Moreover, a recent study by Dinulescu et al. (2021) showed that self-referential processing, the process through which we use knowledge of the self to interpret and understand new information, was associated with greater accuracy (although Dinulescu et al. (2021) used a somewhat different measure of empathic accuracy than the one used in the current study). Together with the observation that men already had significant higher levels than women of trait partner-serving motivation, as well as higher state levels prior to the interaction, perhaps men in the partner-serving motivation condition focused *too* much on their partners and not enough on themselves, which led to impaired empathic accuracy in this specific context. If so, a *moderate* level of motivation for the well-being of the partner might be generally optimal for achieving empathic accuracy in the context of a conflict interaction (Hall et al., 2009).

Finally, turning to self-serving motivation, our attempts to manipulate *self*-serving motivation were successful, but there was no effect of this manipulation on empathic accuracy. Similarly, state level self-serving motivation also had no significant effects, as seen in both the correlational and multilevel analysis. One possible explanation is that for some

people self-serving motivation decreased their empathic accuracy, whereas for others it served to increase it. The argument here, consistent with the principle of *enlightened self-interest* (Tocqueville et al., 2000), is that some perceivers focused narrowly on only their own immediate self-interests and therefore inferred their partner's thoughts and feelings poorly, whereas other perceivers focused on fostering their long-term self-interests by accurately reading their partner to help ensure that a long-term alignment of their respective self-interests could be achieved. It is also possible that self-serving motivation in an intimate relationship context might work in a completely different way than among unacquainted perceivers and targets, which has already been explored in a study by Verhofstadt et al. (2016) and which is worth exploring more in future research.

Throughout our analyses, another objective of this research was to assess the unique predictive value of trait versus state motivations on empathic accuracy. As reported above, general trait motivations did not predict empathic accuracy.[21] In contrast, both the more proximal pre-interaction state motivations and the experimentally induced motivation manipulations *did* affect empathic accuracy, suggesting that motivation "in the moment" may be a more potent predictor of empathic accuracy. Indeed, perhaps the main implication of the current research findings is that, despite our intuitions that motivation must be involved in empathic accuracy, the most effective motives may be relatively transient and situation-based rather than stable and trait-based.[22]

Limitations and Future Research

One important limitation of this work that should be acknowledged is the use of self-report measures of motivation. Different sources in the literature question whether people

[21] This null result is in line with the overall difficulty of finding traits that consistently predict empathic accuracy (Hodges et al., 2015), although some traits, such as social connectedness and attachment style, have been shown to predict empathic accuracy in previous research.

[22] For a possible exception, see the research relating an avoidant attachment style to lower empathic accuracy, an effect that appears to be general rather than situation-specific (see Izhaki-Cost & Shul, 2011; Rholes et al., 2007; Simpson et al., 1999; and Simpson et al., 2011).

have access to their level of motivation and are able to accurately report it (e.g., Hall, 2011; Smith et al., 2011). Even if they have this self-insight, another problem is that people might have motivated reasons to distort the reports of their motivation (Hall, 2011; Smith et al., 2011). For instance, in the present research, many partners were probably prone to answer in a socially desirable manner, of which the high relationship-serving motivation scores could be taken as evidence. Indeed, the results of our manipulation of partner-serving motivation might be an example of the gap between what people report and how they actually perform: Participants who got this manipulation reported greater partner-serving motivation than those who did not (saying that they were more motivated to do things like adopt their partner's opinion and focus on their partner's needs and desires), but then scored lower on their actual empathic inferences. To address this limitation, future research might attempt to use alternatives to self-report measures of motivation such as non-verbal and behavioral measures (Hauser et al., 2018; Thomas & Maio, 2008).

A related limitation is that we did not have a second sample to perform confirmatory factor analyses on our new measures of motivation to confirm and validate the results of our exploratory factor analyses. These analyses should be conducted in future research.

A third limitation is related to our manipulation of motivation and the manipulation check itself. We are not sure that the manipulations worked as intended, because even though we performed a manipulation check, the check was based on a self-report measure of the experienced motivation by the participants which could have been biased. In addition, this manipulation check in itself may have prompted participants to engage in reflections or initiate new processes that would otherwise not occur. As Hauser et al. (2018) mentioned, manipulation checks might amplify, undo, or interact with the effects of the manipulation. Furthermore, our manipulations, like many used in lab studies, were a little contrived and might not have been that effective, as Ickes and Hodges (2013) have noted. Finally, we did

not manipulate different motivations in the partners *within* a couple, which is something future research could explore.

A final limitation is that our sample comprised mostly White, relatively well-adjusted, satisfied and educated couples. Future research should test samples that are more diverse in order to generalize our research findings (Henrich et al., 2010).

Conclusion

The aim of this study was to broadly investigate the association between relationship-, self-, and partner-serving motivation and empathic accuracy in couples' conflict interactions, using both trait and state measures of motivation and a manipulation of motivation. The analyses revealed a negative influence of partner-serving motivation (experimentally induced) on empathic accuracy for men, and a positive association between relationship-serving motivation prior to the interaction and empathic accuracy. These results are similar in some respects but different in other respects from those reported in previous studies, underscoring that, as intuitive as it might be to believe in a straightforward link between motivation and accuracy, the actual story is complicated and will require further research to tell.

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Appendix

Motivation Induction

Control condition, questions

1) When did this difference of opinion begin in your relationship?

2) How often do you have a conversation about this topic?

3) In which situations does the difference of opinion about this topic arise? Please describe this briefly.

4) Who usually initiates a conversation about this topic?

5) How does a conversation about this topic usually end?

Relationship-serving motivation condition, questions and statement

1) What is your opinion about this topic? Can you explain this briefly?

2) What is your partner's opinion about this topic? Can you explain this briefly?

3) What would be a positive outcome for your relationship (concerning this difference of opinion)?

4) In the following conversation, how could you try to find a compromise together with your partner to the benefit of the relationship?

"I can hear that you do have an idea about a possible compromise that would benefit the relationship. I would like to tell you that research has shown that it is important to search for compromises and to focus on the needs of the relationship when talking about a difference of opinion. By doing this, the well-being of the relationship increases. Therefore, it is important to partially give in for the benefit of the relationship during a difference of opinion with your partner and search for a solution that is acceptable for both parties."

Self-serving motivation condition, questions and statement

1) What is your opinion about this topic, regardless of what your partner thinks about it?

2) Could you tell me what you need and desire (concerning this difference of opinion)?

3) What would be a positive outcome for yourself (concerning this difference of opinion)?

4) How could you convince your partner of your opinion in the following conversation?

“I can hear you do have your own opinion about this topic. I would like to tell you that research has shown that it is important to focus on your own needs and desires and to try to convince your partner of your opinion when talking about a difference of opinion. By doing this, your own well-being increases. Therefore, it is important to not just give in during a difference of opinion with your partner, but to try to convince your partner of your opinion.”

Partner-serving motivation condition, questions and statement

1) What is the opinion of your partner about this topic, regardless of what you think about it?

2) Could you tell me what your partner needs and desires (concerning this difference of opinion)?

3) What would be a positive outcome for your partner (concerning this difference of opinion)?

4) Given the following conversation, how could you go along with your partner’s opinion?

“I can hear you are really making an effort to know what the opinion of your partner is. I would like to tell you that research has shown that it is important to focus on your partner’s needs and desires and go along with your partner’s opinion when talking about a difference of opinion. By doing this, your partner’s well-being increases. Therefore, it is important to give in sometimes for the benefit of your partner during a difference of opinion and go along with your partner’s opinion.”

Table A

Correlations between the Variables

	1	2	3	4	5	6	7	8	9	10	11
Empathic accuracy											
1. Feelings	**.42****	*.28***	*.03*	*.08*	*.09*	*-.06*	*.14*	*.09*	*-.04*	*.11*	*.03*
2. Thoughts	.22**	**.38****	*.06*	*.16**	*.05*	*-.12*	*.21***	*-.05*	*-.09*	*.16**	*-.02*
Trait motivation											
3. Self-serving motivation	.05	-.06	**.08**	*.09*	*.34***	*.41***	*-.05*	*.07*	*.38***	*.00*	*.13*
4. Relationship-serving motivation	-.02	.06	.08	**.09**	*.26***	*.05*	*.54***	*.40***	*.24***	*.42***	*.22***
5. Partner-serving motivation	-.02	.08	.19*	.59**	**.08**	*.00*	*.10*	*.40***	*.19**	*.07*	*.33***
Pre-interaction state motivation											
6. Self-serving motivation	.09	.04	.59**	.03	.12	**.26****	*.14*	*.17**	*.71***	*.15*	*.18**
7. Relationship-serving motivation	.16*	.16*	.00	.37**	.24**	.03	**.34****	*.44***	*.29***	*.75***	*.30***
8. Partner-serving motivation	.10	.11	.10	.34**	.47**	.17*	.60**	**.14**	*.28***	*.37***	*.73***
Post-interaction state motivation											
9. Self-serving motivation	.08	.05	.52**	.03	.08	.74**	.10	.18*	**.27****	*.24***	*.20***
10. Relationship-serving motivation	.03	.11	.05	.38**	.22**	-.01	.80**	.58**	.05	**.36****	*.39***
11. Partner-serving motivation	-.02	.07	.13	.30**	.41**	.09	.50**	.70**	.06	.59**	**.18**

Note. Correlation coefficients among men's scores on the variables below the diagonal (regular typeface); correlation coefficients among women's scores on the variables above the diagonal (*italic typeface*)**;** and correlation coefficients between the men and women's scores on the diagonal in **bold**. *p <.05 **p < .01 ***p< .001

Table B

Results for the Models Predicting Empathic Accuracy for Feelings and Thoughts from the Condition and the Perceiver's Pre-Interaction State Motivation[23]

	b	*SE(b)*	95% CI
EA for Feelings			
Men	21.67***	1.49	[18.72 – 24.61]
Women	18.49***	1.56	[15.42 – 21.56]
Relationship*Men	-3.15	2.12	[-7.33 – 1.02]
Self*Men	-2.09	2.11	[-6.26 – 2.07]
Partner*Men	-5.20*	2.12	[-9.37– -1.02]

[23] Interaction with gender only included for condition, not for state motivation.

Relationship*Women	2.84	2.14	[-1.39 – 7.08]
Self*Women	1.14	2.17	[-3.15 – 5.42]
Partner* Women	-1.10	2.17	[-5.39 – 3.19]
Relationship-serving state motivation	1.31*	0.57	[0.19 – 2.42]
Self-serving state motivation	0.11	0.54	[-0.95 – 1.17]
Partner-serving state motivation	0.10	0.63	[-1.14 – 1.34]
EA for Thoughts			
Men	15.02***	1.16	[12.73 – 17.31]
Women	14.44***	1.31	[11.84 – 17.03]
Relationship*Men	0.60	1.65	[-2.65 – 3.85]
Self*Men	-0.70	1.64	[-3.94 – 2.54]
Partner*Men	-3.76*	1.65	[-7.01 – -0.51]
Relationship*Women	-0.21	1.81	[-3.79 – 3.37]
Self*Women	-1.91	1.83	[-5.53 – 1.71]
Partner* Women	1.35	1.84	[-2.28 – 4.97]

Relationship-serving state motivation	1.87***	0.46	[0.98 – 2.77]
Self-serving state motivation	-0.41	0.43	[-1.25 – 0.44]
Partner-serving state motivation	0.77	0.50	[-1.76 – 0.21]

	Empty Model		Full Model		
	Dyad covariance	Error variance	Dyad covariance	Error variance	Pseudo R^2
Model 3	43.12	59.40	37.15	58.57	0.07
Model 4	25.12	41.21	27.63	35.76	0.04

Note. *p <.05 **p < .01 ***p < .001