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by
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Abstract

Drawing on the traditional internal-external dichotomy embraced by attribution research in other non-relational domains, research on attributions in romantic relationships has largely focused on distinguishing between the impact of making partner (internal) and external attributions. Given that past research on relationship cognitions showed that people think in relationship specific ways (e.g., relational schemas; Baldwin, 1992), I propose the need for the inclusion for attributions that capture relationship-specific causes. With that in mind, the present research explored the incremental value of *interpersonal attributions*, which refer to the perception that a partner's behaviors are caused by their love and care (or lack of) for the self and/or the relationship. To establish the importance of interpersonal attributions in relationship research, the aims of the present research are fourfold: 1) to develop a new measure of interpersonal attributions; 2) to demonstrate the unique predictive value of interpersonal attributions on relationship outcomes, beyond internal and external attributions; 3) to illuminate the process through which interpersonal attributions predict relationship satisfaction; and 4) to explore the boundary conditions of the effects of interpersonal attributions. Findings from three studies highlight the importance of moving beyond the dichotomy of internal-external attributions in relationship research. First, factor analyses of data from longitudinal (Study 1) and cross-sectional (Study 2) studies demonstrate that interpersonal

attributions represent a discrete factor not captured by the internal-external distinction. Second, regression results showed that interpersonal attributions predict relationship satisfaction, over and above internal and external attributions. Taken together, these two findings provide evidence for the incremental value of interpersonal attribution.

Next, with the aim of explicating the direct effects between attributions and relationship satisfaction, Study 3 tests a moderated mediation model. Study 3 showed that the effects of interpersonal attributions on relationship satisfaction were mediated by cognitive and affective responses [Perceived Relationship Quality Component Index (PRQC index); Fletcher, Simpson, & Thomas, 2000] as well as partner perceptions [Interpersonal Qualities Scale (IQS); Murray, Holmes, & Griffin, 2000]. Furthermore, these effects were not moderated by the belief that effort can cultivate a successful relationship (i.e., *growth* theory; Knee, 1998). Overall, the findings suggest that the inclusion of interpersonal attributions contribute meaningfully to the discourse on the impact of divergent attribution patterns for partner's behaviors in close relationships.

Keywords: attributions, locus of causality, interpersonal attributions, romantic relationships

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Introduction

Imagine this scenario: Your romantic partner promised to spend the weekend with you, but when the weekend comes around, you find out that he/she has made plans to go out with friends instead. Attribution researchers (e.g., Anderson, Krull, & Weiner, 1996) propose that you will instinctively begin to search for a cause: what do you think caused your partner to act this way? Traditionally, research on attributions in the context of romantic relationships (e.g., Bradbury and Fincham, 1990) focused on two types of causes: whether people make *internal attributions* (i.e., viewing the behavior as originating from factors inside their partner such as their personality, goals or motivation) or *external attributions* (i.e., viewing the cause of the behavior as outside their partner, such as situational circumstances).

This conceptualization of internal-external attributions as varying on a continuum has been widely used in numerous contexts, especially in research focusing on achievement (see Weiner, 1985 for a review). Previous research on attributions in relational contexts adopted the use of this distinction between internal and external attribution for partner behaviors (Fincham & Bradbury, 1992; for a review see Bradbury & Fincham, 1990). However, researchers have shown that people construe interactions with others in relationship-specific ways (e.g., *relational schemas*; Baldwin, 1992), with different schemas capturing interactions with different partners. It may then be that in addition to viewing partner behaviors as caused by factors within the partner (i.e., internal attributions) or factors outside the partner such as situational circumstances or behaviors of the self (i.e., external attributions), intimates may also view these behaviors as caused by their partners' feelings towards them or their relationship (i.e., *interpersonal attributions*; Rempel, Ross, & Holmes,

2001). It then stands to reason that attributions for partner behaviors may not be fully encapsulated by an internal-external attribution dichotomy.

Although some research has identified interpersonal attributions as an important area of consideration and/or studied their usefulness (e.g., Fincham, 1985; Newman, 1981; Rempel et al., 2001), their role in important relationship variables such as relationship maintenance and relationship satisfaction has not been systematically explored. Instead, the majority of existing relationship research has highlighted the detrimental impact of making internal attributions (vis-à-vis external attributions) for partners' negative behaviors on relationship satisfaction (e.g., Fincham, 1985; Fincham & Bradbury, 1992). Therefore, the first aim of the present research is to expand upon the current conceptualization of attributions used in relationship research (e.g., Fincham & Bradbury, 1992) by developing an interpersonal measure to examine their incremental contribution on relationship satisfaction. Specifically, interpersonal attributions for both positive and negative partner behaviors are hypothesized to be discrete latent variables that load onto factors separate from internal and external attributions. After establishing the empirical distinction of interpersonal attributions from internal/external attributions, the present research seeks to demonstrate incremental predictive validity. Interpersonal attributions are hypothesized to influence relationship satisfaction even after accounting for internal and external attributions.

If interpersonal attributions do indeed predict relationship satisfaction, then the next question is *how?* Existing research has established the robust effects of how the attributional style of distressed couples differ from non-distressed couples (e.g., Bradbury & Fincham, 1990), but the underlying mechanism for this association has yet to be explored. Thus, the third aim of the present research is to illuminate the

process by which interpersonal attributions predict relationship satisfaction. In the context of close relationships, intimates' attributions of their partners' behaviors are likely to influence their judgments about their partners' suitability as a relationship partner (Anderson et al., 1996). This may be manifested in the form of cognitive and affective responses about their partner (e.g., commitment, trust, and love) as well as perceptions of their partner's relationship-specific qualities. The present research thus identifies and tests the mediating role of these partner suitability judgments on the link between attributions and relationship satisfaction. Partner suitability judgments are expected to mediate the effects of all three types of attributions (i.e., internal, external, and interpersonal) on relationship satisfaction. However, as interpersonal attributions for partner behaviors implicate how one's partner feels about oneself and/or the relationship, they may be *more tightly* linked to some of these partner suitability judgments, such as commitment, trust, and viewing one's current partner through a more positive lens.

Lastly, the fourth aim of the present research is to address the question: *when* do interpersonal attributions predict favorable judgments about partner suitability, and consequently, enhance relationship satisfaction? The present research explores the potential of implicit theories of relationships (ITRs) as a moderator because past research suggests that different beliefs affect the extent to which individuals view partners' behaviors as diagnostic of romantic compatibility (Knee, 1998; Knee, Nanayakkara, Vietor, Neighbors, & Patrick, 2001; Knee, Patrick, and Lonsbary, 2003; Knee, Patrick, Vietor, Neighbors, 2004). Knee (1998) differentiates between two types of beliefs: *growth* and *destiny*. Growth theorists view romantic compatibility as changeable through effort, whereas destiny theorists view romantic compatibility as

fixed – that is, potential relationship partners are either meant for each other or they are not.

Knee and colleagues (2003) argued that growth may be particularly closely related to the impact of attributions for partners' behaviors on relationship satisfaction. The rationale for this was that the belief that relationship satisfaction can be cultivated through effort would make growth theorists' feelings towards and perceptions of their partner more resistant to the influence of a small sample of their partners' negative behaviors. Past research on ITRs has supported this hypothesis, showing that growth beliefs serve adaptive functions, buffering against the negative effects of conflicts (Knee et al., 2004) and having a less than ideal partner (Knee et al., 2001) on relationship satisfaction. The present research thus aims to extend on existing research by examining the moderating role of growth on the link between attributions and partner suitability perceptions.

Partner suitability judgments are hypothesized to mediate the link between all three types of attributions and relationship satisfaction; however, the interpersonal attributions – partner suitability – relationship satisfaction link is *not* expected to be moderated by growth. As interpersonal attributions for partner behaviors directly implicate how one's partner feels about their relationship, this attribution is expected to provide compelling information about the suitability of their partners. Thus, a growth belief is not expected to convince an individual that their partner is suitable despite his/her lack of love for the self, nor would it strengthen an individual's conviction of their partners' suitability beyond knowing that his/her partner loves the self.

In contrast, the other two mediation chains (i.e., *internal attributions – partner suitability – relationship satisfaction* and *external attributions – partner suitability – relationship satisfaction*) are expected to be qualified by growth beliefs. First, an internal attribution suggests that the individual views positive or negative partner behaviors as caused by the *partner's disposition*. A belief in growth may buffer against the negative effects of a partner of poor disposition because the individual believes that they can overcome these shortcomings with effort; similarly, a growth belief may enhance the positive effects of a good disposition by convincing the individual that their partner's good disposition make them a worthwhile romantic partner. Next, an external attribution suggests that the individual views positive or negative partner behaviors as caused by *outside factors*. A belief in growth may buffer against the negative effects of attributing positive behavior to outside factors because the individual believes that they can work to overcome the negative relationship situation; similarly, a growth belief may enhance the positive effects of attributing negative behavior to outside factors because the individual sees the positive relationship situation as an indication that their relationship is worthwhile. Thus, the final aim of my dissertation is to ascertain whether growth theory has divergent effects on the mediation chains when comparing interpersonal vis-à-vis internal and attributions as predictors of relationship satisfaction. The theoretical model presenting these four aims is represented in Figure 1.

In the sections below, I will first provide a review of the attribution literature, with the goal of providing the foundation for a more detailed examination of attributions in the domain of interpersonal relationships. Building upon existing research, I will discuss the theoretical significance of interpersonal attributions, and their potential direct and incremental effects on relationship maintenance behaviors

and relationship satisfaction. Next, I will review research linking attributions and relationship satisfaction to partner suitability judgments to expound on the hypothesized mediation chain. Lastly, to provide the basis for including growth as a moderator, I will review the literature on how different implicit theories have been shown to play a moderating role on the outcomes of various behaviors in the relationship context. I will then present the full moderated-mediation model, and elaborate on how it is able to provide important insights into the dynamic process of relationship maintenance.

Literature Review

Attribution Theory

People have a natural desire to understand why things happen the way they do, that is to say, when confronted with certain events, people tend to look for what caused them in the first place (Anderson et al., 1996; Heider, 1958). Understanding the processes surrounding this "why?" question is the fundamental aim of attribution theory, and involves making sense of the information people use when making causal inferences (Kelley, 1973). In the social psychological literature, when people identify the cause(s) of behaviors or events, they are said to be making *attributions*. According to Weiner (1985), this pursuit of "why" is grounded in a desire for mastery (White, 1959), and is adaptive in that it provides us with knowledge that can be used as a prescription or guide for future action. This tendency to assign causation (i.e., making attributions) is universal, and is readily involved in every aspect of our cognition (Harvey & Weary, 1984). Thus, it is unsurprising that a large body of research has developed in an attempt to properly understand how they work.

Many of the earlier lines of attribution research originate from Kelley's (1972, 1973) covariation model and Weiner's work on attributions in the achievement context (1985). According to Kelley (1972), individuals determine the cause of a behavior or event by studying information on the consistency, consensus, and distinctiveness of the behavior or event in question. For example, when considering the example of breaking a promise (outlined in the beginning of the dissertation), an intimate may respond to their partner's broken promise by asking, "does he usually break his promises to me?" (*consistency* – how consistent the behavior is across similar contexts and times), "do other people break their promises to me?" (*consensus*

– whether other people behave in a similar manner towards the target), and "does he break his promises to others?" (*distinctiveness* – is the same behavior directed to others as well). Using this information, the intimate can then infer an internal (e.g., he acted this way because of the type of person he is) or external attribution (e.g., my partner acted this way due to something about him or the situation he was in).

In contrast, Weiner (1985) focused on the motivational and affective consequences of causal judgments people make for achievement related events. In his landmark paper on attributions in the achievement domain, Weiner (1985) identified five dimensions of causality: locus of causality, stability, controllability, intentionality, and globality. L*ocus of causality* captures the location of a cause as inside (internal) or outside (external) to the actor. *Stability refers to* whether the cause is constant or if it varies over time. *Controllability* focuses on whether a cause is subject to the actor's volitional control. *Intentionality assesses* whether the cause is due to the actor's intentional or unintentional actions. *Globality* taps into whether a cause is specific to a given situation or if it can be generalized across different settings (Graham, 1991; Weiner, 1979; Weiner 1985).

The present research on attributions in an interpersonal context focuses on the locus of causality dimension. The rationale for this is twofold. First, according to Anderson and Riger (1991), people naturally think about attributions on the dimensions of controllability and locus (as compared to stability and globality). However, as the present research requires individuals to understand their *partner's* behaviors, the controllability dimension becomes multi-faceted. In this context, controllability can refer to the perceived controllability of the behavior by the partner engaging in the behavior, by the self in thwarting the behavior, or whether the behavior can be controlled by people in general (i.e., controllability not specific to the

partner). Thus, controllability is no longer a unidimensional variable, as originally conceptualized in existing attribution research. Second, the locus dimension has a fundamental role in determining whether the consequences of how intimates come to understand the causes of their partner's behaviors are positive or negative. To illustrate, an internal attribution for negative behavior will have a more detrimental effect if it is also perceived as controllable, or as stable and global, but an external attribution for negative behavior will be more adaptive regardless of the stability and globality of the cause because it implies uncontrollability. Thus, whether the attribution has a detrimental versus beneficial effect originates from the locus dimension, but these effects may be *qualified* by the controllability, stability and globality dimensions.

The present research expands on the locus of causality dimension by arguing for the need to consider interpersonal attributions, especially in interpersonal contexts such as romantic relationships (Rempel et al., 2001). With that in mind, the following sections will first discuss how attribution research has largely focused on the internal-external distinction, and why it is important to take interpersonal attributions into consideration when examining behaviors that are interpersonal in nature. Thereafter, the present research will describe how the attributional literature in romantic relationships has developed, leading up to the introduction of the model of expanded locus dimension and details of the current research.

The Internal-External Dichotomy in Attribution Research

The dominance of studying attribution in the achievement domain engendered the tradition of examining the impact of perceiving an event as caused by either internal or external factors. This body of research delineates the kind of attributions

people make in response to experiencing success or failure, as well as the impact of these attributions on subsequent attempts on achievement-related tasks (e.g., Anderson, 1991; Anderson & Slusher, 1986; Weiner, 1985). The usage of the internal-external dichotomy in achievement literature is intuitive because the outcomes in question are binary – individuals either succeed at something or they fail. Given a success, individuals can either credit themselves (e.g., for studying hard or being smart; internal attributions) or they can attribute success to an external factor (e.g., the test was easy); given a failure, internal (e.g., I am not smart) and external attributions (e.g., the test was too hard) can also sufficiently explain the outcome. In the domain of achievement, the relevant causal ascriptions for successes and failures are thus: ability, effort, task difficulty, and luck (Graham, 1991; Weiner, 1985). These four causes capture the distinction between internal (i.e., ability and effort) and external (task difficulty and luck) attributions. The achievement literature has been the cornerstone of attribution research, thus, it is no surprise that the tendency to compare the impact of internal versus external attributions has permeated research on attributions in close relationships.

Attributions in Romantic Relationships

In the achievement literature, perceivers are making attributions for outcomes that they experience themselves. Under these circumstances, an internal attribution refers to the self. The attribution process in romantic relationships differs from the one for achievement in two important ways. First, individuals are not trying to explain their own behaviors/outcomes, but they are trying to explain their *partner's* behaviors. Second, individuals are trying to explain their partner's behaviors *towards them*. Therefore they are both the *perceivers* and the *targets* of their partners' behaviors. When perceivers make an *internal* attribution, they are pinpointing *their partner's*

disposition as the cause of the behavior. In contrast, *external* attributions can refer to transient situational factors (e.g., stress at work; *situational attributions*), or it can refer to themselves as the target of their partner's behaviors (i.e., self-blame; *self attributions*). However, this internal-external distinction may not adequately capture the entire range of attributions that intimates can make in response to their partner's behaviors. More specifically, to understand their partner's behaviors, intimates may also consider whether these behaviors are caused by the way their partner feels towards them and/or their relationship (i.e., *interpersonal attributions*). The present research proposes that interpersonal attributions cannot be categorized as internal or external attributions because they refer to specific dynamics *between* two partners. In the subsequent section, I will review the existing work done on locus of causality attributions in the domain of romantic relationships. I will then describe how it has evolved over the years to its present state, with an emphasis on describing the process that led up to the present conceptualization of attributions.

Early attribution research in romantic relationships. Early attribution research in romantic relationships was pioneered by Fincham, Bradbury, and their colleagues (Bradbury & Fincham, 1992; Bradbury, Beach, Fincham, & Nelson, 1996; Fincham, 1985; Fincham, Beach, & Baucom, 1987; Fincham, Beach, & Nelson, 1987; Fincham & Bradbury, 1987, 1988, 1992; 1993; Fincham & O'Leary, 1983; Karney & Bradbury, 1995; Miller & Bradbury, 1995; see Bradbury & Fincham, 1990 for a review). Their work sought to identify the divergent patterns of attributions made by distressed versus non-distressed married couples, with the focus on developing strategies to help distressed couples make more adaptive attributions. Their research showed that in general, distressed couples tended to make more partner attributions (internal attributions with regards to the partner) for negative relationship events and

fewer partner attributions for positive relationship events than did non-distressed couples (e.g., Fincham, 1985). For example, Fincham (1985) recruited both distressed and non-distressed married couples, and asked them to make attributions in response to self-generated marital difficulties. Results showed that distressed couples, relative to their non-distressed counterparts, were more likely to attribute the marital difficulties they identified to their partner (i.e., internal attributions). Indeed, in their review of research on attributions in marriage, Bradbury and Fincham (1990) found that in general, non-distressed couples made external attributions for negative partner behavior and internal (partner) attributions for positive partner behavior. In contrast, distressed couples tended to attribute negative behavior to internal factors, and positive behavior to external factors.

Their findings however, showed some evidence of inconsistencies. Some of the studies partially corroborated these findings, whereas other studies failed to replicate these effects. For example, Fincham and O'Leary (1983) recruited distressed and non-distressed couples and asked them to make attributions in response to 12 hypothetical marital situations, six of which were positive (e.g., your spouse pays careful attention to what you were saying), and six of which were negative (e.g., your spouse cuts down on time he/she spends with you in favor of an independent activity). Results showed no differences in the extent to which distressed versus non-distressed participants made internal attributions.

The development of the Relationship Attribution Measure (RAM). Fincham and Bradbury's (1992) solution to the apparent inconsistencies in the relationship attribution literature was to develop the RAM, which takes into consideration not only locus of causality, but other dimensions as well. The goal was to use individual differences in attributional styles within romantic relationships to

predict various relationship variables and outcomes. The RAM provides participants with a set of eight hypothetical negative partner behaviors and asks them to rate the extent to which each behavior was internal (vs. external) to the partner, stable, global, intentional, motivated by selfish reasons, and blame-worthy. These six attributions were subsequently combined into two composites. Locus of causality, stability, and globality were summed to form the first factor of causal attributions, while intentionality, motivation, and blame were summed to form the second factor of responsibility attributions. These attribution dimensions were selected as having the most utility and being the most widely researched in the literature [as demonstrated in Bradbury and Fincham's (1990) review].

Beyond internal-external: The importance of interpersonal attributions. Despite the improvement of the RAM over earlier research in its inclusion of multiple dimensions, the locus of causality dimension is still measured dichotomously. When considering locus of causality attributions made in interpersonal contexts, relying solely on an internal-external distinction does not adequately capture all the potential causes. For example, when an individual is attempting to understand his/her partner's behaviors towards the self, the individual may consider not only the partner's dispositions as playing a role (i.e., internal attribution) or situational circumstances (i.e., external attributions), but he/she may also see the behavior as caused by how the partner feels towards them and their relationship (Rempel et al., 2001). The present research thus argues for the need to move beyond this attribution dichotomy to allow for *interpersonal* attributions (e.g., my partner acted this way because he does not love me). This type of attribution may be particularly relevant in contexts that involve social interactions between people.

Departing from the limited taxonomy of internal and external attributions, the present research proposes the need to capture locus of causality from a multi-dimensional (rather than unidimensional) perspective when studying attributions in interpersonal contexts. In explaining partners' behaviors, an actor may ascribe the cause to their partners' dispositions (internal attribution) or to the situation (external attribution). Consistent with Kelley's covariation model (1972), the target of the behavior can also be blamed (i.e., self-attribution). More importantly, the relationship-specific dynamics (i.e., how my partner feels about me and/or our relationship) can also be seen as the cause of partners' behavior (interpersonal attribution). Although interpersonal attributions have not been the focal aspect of systematic study, past research has alluded to the importance of this type of attribution.

Relational schemas and interpersonal attributions. As described above, research on attributions in romantic relationships has relied heavily on the foundation laid by attribution theory. However, Anderson (Anderson et al., 1988; Anderson, 1999) argued that the causes to which individuals ascribe non-interpersonal outcomes and interpersonal outcomes differ, and thus, researchers must examine attributions for these domains separately. Taking this argument further, the present research proposes that not only should attributions for these two domains be examined separately, one must also consider how the number of *available* attributions for understanding interpersonal behaviors also differ from non-interpersonal ones. To do so requires the integration of attribution theory with research on relational schemas.

Relationship theorists have argued that individuals construct relational schemas in response to frequent interactions with the same individual (Baldwin, 1992). Relational schemas refer to people's schemas of themselves in relation to their

interaction partner (e.g., “I am attentive whenever I am with her”), schemas of their partners in relation to the self (e.g., “She is affectionate during our interactions”), and schemas about the expected pattern of interaction (e.g., “I know that she will always tend to my needs”). In this way, relational schemas are contextual, capturing the aspects of the self (and partner) that are exhibited during the interactions specific to these two partners, and the expected specific interaction pattern going forward. Therefore, rather than thinking about a partner’s behaviors towards the self as being solely driven by internal or external forces, it is possible that individuals may view the source of their partners’ behavior as originating from relationship-specific causes.

In explicating the nature of relationship-specific causes, Rempel et al. (2001) identified two different kinds of relationship attributions. In their study on trust and communicated attributions in close relationships, relationship attributions are described as: 1) explanations that describe the cause as how one partner feels toward the other, or as 2) the behavioral interactions involving both partners as a couple (Rempel et al., 2001). Rempel and colleagues’ (2001) conceptualization of relationship attributions thus distinguishes between interpersonal attributions (i.e., attributing causality to how one partner feels about the other and/or the relationship they share) and interaction attributions (i.e., attributing causality to how the two partners behave and interact with each other in the course of the relationship). Results showed that high trust couples were more likely to make positive attributional statements (i.e., interaction + interpersonal) that were often associated with relationship attributions than were medium and low trust ones.

Although Rempel et al. (2001) operationalized relationship attributions as comprising of both interpersonal and interaction attributions, other researchers examining communication in close dyads have isolated the importance of interaction

attributions. Newman (1981) theorized that, unique to close relationships, is the influence which the ongoing relationship has on the attribution-making process. This effect stems from communicative attempts to define the nature of the relationship. Specifically, ongoing interactive relationship processes are said to give rise to particular perspectives, which in turn affect the way intimates conceptualize the causes of each other's behavior. As such, these interpersonal attributions "differ from ordinary situational or dispositional attributions by virtue of an interactive focus" (p. 63). Also, in Berscheid, Lopes, Ammazzalorso, and Langenfeld's (2001) research on the causal attributions of relationship quality, participants were asked to identify a target relationship and describe in a written, open-ended response format, why it was of its present quality. Responses were coded, and the results showed that an overwhelming percentage (81%) cited relational conditions, most of which were causal references to the nature of their interactions with their partner (68%).

In sum, existing research provides evidence that individuals construe their partners' behaviors in relational terms, lending credence to the present research's aim to move beyond the internal-external dichotomy in the context of making attributions for partner behaviors in close relationships. In their research, Bersheid and colleagues (2001) found that intimates spontaneously use interactions attributions to explain the current state of their relationship (e.g., we fight a lot because that is what we do in this relationship). These attributions thus reflect how the dyad is currently interacting. However, they do not explain *why* their interaction pattern is at its current state – that is, how did they reach this point of fighting a lot? The present research proposes that interaction attributions evolve over the course of the relationship, and that it is important to consider how intimates draw conclusions about the causality of their partner's positive and negative behaviors in their dyadic exchanges over time.

Attributing their partner's behaviors to how their partner feels about them and/or their relationship (i.e., making interpersonal attributions) may modify the expected pattern of interaction dynamics. That is, if one were to view their partner's positive (negative) behaviors as caused by their partner's love (lack of love) for them and/or their relationship, they are likely to develop more positive (negative) relational schemas, and make more adaptive (maladaptive) interaction attributions. The present research thus extends on previous research by isolating the effects of *interpersonal attributions* as defined by Rempel et al. (2001) – attributing causality to how one partner feels about the other and/or the relationship they share.

Addressing Limitations of Existing Research

Based on the earlier literature review, four limitations in past research on attributions in romantic relationships have been identified. The first limitation is that the RAM measures perceptions of locus using a unidimensional scale, with internal attributions on one end and external attributions on the other end. This operationalization has two shortcomings. First, this assumes that internal and external attributions are mutually exclusive – when an intimate makes an internal attribution, he or she is not making an external attribution for their partner's behaviors. This gives rise to ambiguity in interpreting the results because it is not clear whether the effects of attributions on relationship satisfaction occurs when an individual makes an internal attribution or when an individual *does not make an external attribution* for a behavior. Second, the meaning of the mid-point the internal-external continuum is unclear. That is, there are two possibilities when individuals use the mid-point of the scale: 1) Neither internal nor external factors are the singular cause of the behavior; 2) Both internal and external factors conjointly cause the behavior. To overcome these measurement concerns, the present research developed an attribution measure that

examines each locus of causality dimension separately (i.e., internal, external and interpersonal) rather than pitting locus dimensions against each other using a unidimensional measure. In this way, the present research is able to disentangle the effects of each specific type of attribution rather than one type of attribution *in relation* to another. It also offers the possibility of making more than one type of attribution for each behavior.

The second limitation is that past research on attributions have largely neglected the importance of interpersonal attributions, despite theorizing about their importance (e.g., Fincham & Bradbury, 1992; c.f. Rempel et al., 2001). Thus, the present research integrates attribution theory with research on relational schemas. As research reviewed earlier suggests, when considering their interaction with others, people often think in relationship specific ways (Baldwin, 1992). Furthermore, interpersonal attributions were shown to occur spontaneously in relationship contexts (Berscheid et al., 2001; Manusov & Koenig, 2001; Newman, 1981; Rempel et al., 2001). As such, intimates' perceptions about how their partner feels toward them and/or their relationship should have a sizeable impact on their level of relationship satisfaction. If this were true, the use of a unidimensional measure with partner factors (i.e., internal) and non-partner factors (i.e., situational or the self) on each end paints an incomplete picture of the attributional process in this type of interaction.

In the present research, Likert scales are used to measure attributions as did the RAM. Thus far, the few studies which have studied interpersonal attributions in close relationships have used open-ended responses that require independent coding (e.g., Berscheid et al., 2001, Rempel et al., 2001). Although this research has demonstrated the natural occurrence of relationship attributions, open-ended responses make it difficult to quantify the *unique* effects of interpersonal attributions

for at least two reasons. First, coders may find it difficult to quantify the strength of interpersonal attributions vis-à-vis internal/external attributions. For example, a statement such as: "He yelled at me because he hates me and he has a short temper" includes both an interpersonal attribution and a partner attribution. However, the relative strength of each type of attribution cannot be ascertained from these statements alone. Second, the absence of an attribution being *generated* in response to open ended questions may not necessarily mean that the perceiver does not believe that this factor is a cause. It may instead reflect its relatively lower salience as compared to other attributions. For example, even though a statement such as: "He yelled at me because he has a short temper" will be coded as an internal attribution, it is unclear whether the absence of other attributions (such as "He yelled at me because he hates me") signifies that these types of attributions were not made, or that these attributions are viewed as having less import than the focal attribution. This distinction of not viewing a dimension as a cause versus viewing a dimension as a *less important* cause could potentially have dissimilar effects on relationship quality. As such, it is important to examine the discrete effects of each attribution for any given partner behavior. The present research has thus measures each attribution on a separate dimension via a newly developed attribution measure. This would allow for the systematic study of the incremental value of interpersonal attributions.

The third limitation is that the RAM requires participants to *imagine* their partners engaging in negative behaviors, and to explain why their partners may have acted in those ways. This focus on hypothetical negative behaviors may be a function of the research questions of interest: RAM was designed to understand the differences between distressed and non-distressed couples, and design interventions to improve the relationship satisfaction among the distressed group. Thus, understanding the

types of attributions made by distressed couples for these hypothetical negative RAM behaviors may be particularly relevant because these behaviors may be more frequent and more severe among this group. However, it is possible that non-distressed couples do not experience them much nor with such great intensity. As such, when non-distressed couples make attributions for hypothetical negative RAM scenarios, they may be doing so to at least a few partner behaviors that rarely, if ever, occur (e.g., imaging that their partner is intolerant of them). This means that the attributional style observed with the RAM may not capture the *actual* attributions individuals would make for real (and not hypothetical) partner behaviors. Relatedly, focusing solely on negative behaviors may result in an incomplete picture. Among the distressed couples (who rarely experience positive interactions), attributions for such events may not be as predictive of relationship satisfaction. This may be why positive behaviors were excluded from the RAM. However, non-distressed couples are likely to engage in more meaningful positive behaviors in their dyadic exchanges. Thus, their attributions in response to positive behaviors are likely to be more reliably predictive of relationship satisfaction. As such, instead of adopting the hypothetical negative scenarios of the RAM, the present research utilizes recalled (Study 1) and frequent (Study 2 and 3) positive and negative partner behaviors as the basis for which intimates to make attributions. Doing this ensures that the behaviors that intimates make attributions for are real and happen with a certain amount of frequency. This would minimize the problem of lack of relatability, as well as account for effects that attributions made in response to positive behaviors may have.

The final limitation of past research on attributions in romantic relationships lies in the lack of clarity of the definition of partner (i.e., internal) attributions. When responding to the hypothetical RAM scenarios, intimates are asked if their partners'

behaviors are due to something about their partner (Fincham & Bradbury, 1992). Thus, the phrasing of an internal attribution is broad and can encompass different aspects of the partner. While the examples of attributions given as part of the instructions provided by the researchers include the type of person they are (e.g., he is an undependable person), it also mentions temporary states their partner might have been in (e.g., he was in a bad mood). In addition to the stability of the internal cause, individuals might conceivably think of other internal factors as the cause, such as their partner's goals, motivations, and ability. This vagueness in meaning of internal attributions makes it difficult to ascertain the type of internal causes that are being referenced by participants. While examining other internal attributes of the partner may be meaningful in their own right, the present research theorizes that attributing positive and negative behaviors to central and relatively stable aspects of the partner will have a greater impact on relationship satisfaction. Thus, the current research specifically explores *dispositional* attributions. The items on the dispositional attributions target the extent to which intimates attribute behavior to their partner's enduring traits and characteristics more directly (e.g., "To what extent was the behavior a reflection of your partner's character?"; refer to Table 1 for the full list of dispositional attribution items).

The Present Research

Refining the Locus of Causality: Including Interpersonal Attributions

With this in mind, the first aim of the present research is to expand upon the current internal-external attribution dichotomy. This is achieved through the utilization of multi-dimensional measures of attributions, including dispositional attributions (i.e., internal attributions to the actor), situational and self attributions (i.e., two types of external attributions), and interpersonal attributions. Dispositional, situational, and interpersonal attributions will be applicable for both positive and negative partner behaviors, whereas self attributions will only be examined for negative partner behaviors. The inclusion of self attributions was inspired by research on self-blame within close relationships. Past research has shown self-blame for negative partner behaviors to be an important predictor of relationship quality (e.g., "he criticized me because of the unchangeable aspects of who I am"; Madden & Janoff-Bulman, 1981), but has not found attributions to the self for positive partner behaviors to play a role. In addition, it seems intuitive for one to blame oneself for provoking negative behaviors in one's partner (i.e., self-blame), seeing the self as the cause of the partner's negative behaviors. In contrast, by attributing a partner's positive behavior to the self seems counter-intuitive because it not only discredits the partner for acting positively, but it also renders the partner without agency.

As such, the expanded set of locus of causality attributions is presented in Table 1 and comprises seven different kinds of attributions in total: interpersonal, dispositional, and situational attributions for positive behaviors as well as interpersonal, dispositional, situational, and self attributions for negative behaviors. To demonstrate the importance of including interpersonal attributions, the present

research will show that: 1) Interpersonal attributions are empirically distinct from internal and external attributions; 2) Interpersonal attributions predict relationship satisfaction; and 3) The effects of interpersonal attributions will hold even after controlling for internal and external attributions.

Factor Analyses. Both exploratory and confirmatory factor analyses will be conducted to demonstrate that interpersonal attributions capture a construct that is empirically distinct from dispositional, situational, and self attributions. The exploratory factor analysis (EFA) on Study 1 (Wave 1; W1) is expected to yield seven distinct factors as displayed in Table 1 (Hypothesis 1a). The confirmatory factor analyses (CFAs) in Study 1 (Wave 2; W2) and Study 2 are expected to show that a seven factor solution corresponding to the EFA in Study 1 W1 fits the data well (Hypotheses 1b and 1c). This goodness-of-fit of this seven factor model will be tested against two alternative models. The first alternative model combines dispositional and interpersonal attributions into two single factors, one for positive, and one for negative behaviors, forming a five factor model with situational attributions for positive and negative (two factors), and self attributions for negative behaviors (Alt Model #1). This model tests the alternative interpretation that dispositional and interpersonal attributions are not empirically distinct. The second alternative model comprises four factors, interpersonal attributions for positive and negative behaviors (2 factors), and other attributions for positive behaviors (i.e., dispositional and situational) and attributions for negative behaviors (i.e., dispositional, situational, and self; Alt Model #2). This model tests the alternative interpretation that interpersonal attributions tap into a different factor (i.e. meta-cognition) from the other attributions.

Effects of Attributions on Relationship Satisfaction

In addition to factor analyses, support for the inclusion of interpersonal attributions into the locus of causality needs to be shown by replicating past findings that link dispositional, situational and self-blame attributions to relationship satisfaction, and show that interpersonal attributions have a direct effect on relationship satisfaction. Given that past research has demonstrated that attributions to the same source (e.g., partner vs. external factors) have different implications depending on the valence of the behaviors, I have organized my hypotheses accordingly. In the first series of hypotheses, I predict the direct relationship between attributions and relationship satisfaction, without any control variables. As past research has observed a similar pattern of associations between attributions and relationship satisfaction in cross-sectional and longitudinal studies, my hypotheses for associations within and across waves are the same.

Direct effects of attributions of relationship satisfaction (i.e., without controls).

Attributions for positive behaviors. Attributing positive behaviors to interpersonal factors (i.e., how one's partner feels toward oneself and/or one's relationship) is likely to be beneficial for relationship satisfaction. Thus, interpersonal attributions for positive behaviors are hypothesized to positively predict relationship satisfaction (Hypothesis 2a). Consistent with past research, partner attributions for positive behaviors are also expected to positively predict relationship satisfaction (Hypothesis 2b); whereas external attributions for positive behaviors are expected to negatively predict relationship satisfaction (Hypothesis 2c).

Attributions for negative behaviors. Conversely, attributing negative behaviors to interpersonal factors (i.e., how one's partner feels toward oneself and/or one's relationship) is likely to be detrimental to relationship satisfaction. Thus, interpersonal attributions for negative behaviors are hypothesized to negatively predict relationship satisfaction (Hypothesis 2d). Consistent with past research, partner attributions for negative behaviors are also expected to negatively predict relationship satisfaction (Hypothesis 2e); whereas external attributions for negative behaviors are expected to positively predict relationship satisfaction (Hypothesis 2f). Lastly, blaming oneself for negative behaviors is expected to be detrimental to relationship satisfaction, and as such, self attributions for negative behaviors should negatively predict relationship satisfaction (Hypothesis 2g).

Incremental effects of interpersonal attributions on relationship satisfaction. In the preceding sections, interpersonal attributions were endorsed as being critical for refining the theoretical framework of attributions in close relationships. The present research thus aims to demonstrate its incremental predictive value by showing that the direct effects still holds, even after controlling for other attributions for the same valenced behaviors. Attributions for opposite valenced behaviors are not controlled for they reflect the perceived causes of a different set of behaviors.

Attributions for positive behaviors. It is argued that interpersonal attributions for positive behaviors are essential in predicting relationship satisfaction. Perceiving a partner's positive feelings for the self/the relationship as the cause for positive behavior is expected to be more closely related to relationship satisfaction than simply viewing a partner as a good person (i.e., dispositional attribution) and not assuming that positive behaviors are due to situational circumstances (i.e., situational

attributions). Therefore, interpersonal attributions for positive behaviors are expected to predict relationship satisfaction, even after controlling for partner and external attributions for positive behavior (Hypothesis 3a).

Attributions for negative behaviors. The prediction for the incremental value of interpersonal attributions for negative behaviors is less straightforward. First, the argument used to outline the predictive value of interpersonal attributions for positive behaviors may also apply (i.e., interpersonal attributions have a strong direct link to relationship satisfaction that overrides dispositional attributions). If this were the case, interpersonal attributions will predict relationship satisfaction even after controlling for dispositional, situational, or self attributions for the same behaviors. However, it is also possible that the negativity bias makes it hard to differentiate between the cause of the negative behavior as due to the partners' lack of love for the self (i.e., interpersonal attribution) or as due to the partner's poor disposition (i.e., dispositional attribution). For example, when their partner yells at them, this negative behavior is likely to elicit a strong emotional reaction, , resulting in the judgment that the behavior is due to both the way their partner feels about them/their relationship, and his or her disposition. In addition, the two may be closely linked such that one reflects the other (i.e., "my partner's lack of love for me shows me the kind of person he or she is" or "my partner has a horrible disposition which is why he doesn't love and appreciate me"). This intricate link between interpersonal and partner attributions for negative behaviors may suggest that interpersonal attributions will not predict relationship satisfaction after controlling for other attributions for the same behaviors (Hypothesis 3b).

Mediators of the link between Attributions and Relationship Satisfaction

To fully understand the incremental contributions of interpersonal attributions, the present research aims to differentiate between the mechanisms underlying their effects vis-à-vis the effects of internal/external attributions on relationship satisfaction. Drawing from Anderson and colleagues' (1996) research on the consequences of attributions, intimates' attributions of their partners' behaviors are likely to influence their judgments about their partners' suitability as a relationship partner. This may be manifested in their cognitive and affective response to their partner or their relationship (e.g., how much they trust or love their partner, or how committed they are to their relationships) as well as perceptions of their partners' relationship specific qualities. Individuals' cognitive and affective responses to their partner or their relationship is operationalized using Fletcher, Simpson, and Thomas' (2000) Perceived Relationship Quality Component (PRQC) index comprising the six components of satisfaction, commitment, intimacy, trust, passion, and love. Partner perceptions is operationalized using Murray, Holmes, and Griffin's (2000) Interpersonal Qualities Scale (IQS) comprising a comprehensive list of partner relationship qualities. The following sections outline the specific hypotheses of how the PRQC index and IQS mediate the link between attributions and relationship satisfaction.

Perceived Relationship Quality Component Index. Developed by Fletcher and colleagues (2000), the PRQC index is a face-valid measure of various components that contribute to relationship quality. The authors identified these components based on past research [satisfaction, Hendrick (1988); commitment, Lund (1985); intimacy, Sternberg (1986, 1988); trust, Boon & Holmes (1990); passion, Sternberg (1986); love, Rubin (1973)]. In their study, although the authors identified

six domain-specific first-order factors (one for each relationship quality component), they all loaded onto a single second-order factor of overall perceived relationship quality. It may be the case then that attributions intimates make for positive and/or negative partner behaviors influence some (but not all) of the cognitive and affective responses and these specific responses in turn influence a more global measure of relationship well-being such as relationship satisfaction (as measured by Norton, 1983). These components capture both cognitive (i.e., trust, commitment and intimacy) and affective (i.e., love and passion) responses towards one's partner. The following sections briefly review relevant research for the various PRQC index components that supports this prediction.

Attributions for positive behaviors.

Interpersonal attributions (Hypothesis 4a). The concepts of commitment, trust, and intimacy tend to be intricately linked – if an individual trusts their partner, they are also more likely to be committed and see their partner as an important aspect of the self (Fletcher, Fincham, Cramer, Heron, 1987). These factors also contribute to the love that intimates will express towards their partner (Fletcher et al., 1987). As such, if an intimate sees their partner's positive behaviors as due to their partner's love for them or positive feelings towards their relationship, they are likely to be more committed and trusting, as well as report greater intimacy and stronger love in response. These four PRQC index components are then expected to positively predict relationship satisfaction. In contrast, passion refers to lustful feelings which are expected to be less influenced by interpersonal attributions for positive behaviors, as passion may be more related to physical attractiveness and general chemistry. Thus, passion is not expected to mediate the relationship between interpersonal attributions for positive behaviors and relationship satisfaction.

Dispositional attributions (Hypothesis 4b). As previously highlighted, partner attributions for positive behaviors may indicate to intimates that their partner is a good person, but not necessarily a good relationship partner for them. However, due to confirmation biases positive illusions in the perception of relationship partners (e.g., Gagne & Lydon, 2004; Murray et al., 2000), seeing one's partner as a good person may have spill over effects on intimates' levels of commitment, trust, intimacy, and love. As such, these four PRQC index components are likely to mediate the relationship between dispositional attributions for positive behaviors and relationship satisfaction as well. Again, with the same rationale as indicated above, I do not hypothesize a mediating effect for passion.

Situational attributions (Hypothesis 4c). When making situational attributions for positive behaviors, intimates are essentially discounting the positive behaviors of their partners. This dismissal is thus likely to have a negative effect on their levels of commitment, trust, intimacy, and love. As such, situational attributions for positive behaviors are expected to negatively predict these four PRQC index components. Again, with the same rationale as indicated above, I do not hypothesize a mediating effect for passion.

Attributions for negative behavior.

Interpersonal attributions (Hypothesis 4d). If an intimate sees their partner's negative behaviors as due to the way he or she views them and/or their relationship, their cognitive and affective responses are likely to be negatively impacted. For example, if Justina thinks that the reason why her partner broke his promise toward her is because he does not love her or that their relationship is not important to him, she is likely to be less committed to their relationship, feel less close to, and trust and

love him less. Commitment, intimacy, trust, and love are thus expected to mediate the link between interpersonal attributions for negative behaviors and relationship satisfaction. In contrast, as argued above, passion refers more to feelings of lust, and may be more related to physical attractiveness and general chemistry instead of how one perceives the behaviors of their partners. Passion is thus not expected to mediate the relationship between interpersonal attributions for negative behaviors and relationship satisfaction.

Dispositional attributions (Hypothesis 4e). As previously mentioned, the effects of dispositional attributions and interpersonal attributions for negative behaviors are likely to be difficult to disentangle. The mediating role of PRQC index components on the link between dispositional attributions for negative behaviors and relationship satisfaction is thus expected to be the similarly negative as it was for interpersonal attributions for negative behaviors.

Situational (Hypothesis 4f) and self (Hypothesis 4g) attributions. When making external attributions (i.e., situational and self attributions) for negative behaviors, intimates are essentially absolving their partner from any blame. In the case of situational attributions, this is likely to negate any possible adverse effects that the negative behavior might have on cognitive and affective responses towards their partner. This is likely to result positively impact intimates' of levels of commitment, trust, intimacy, and love. These four PRQC index components are thus likely to mediate the relationship between situational attributions for negative behaviors and relationship satisfaction.

In the case of self attributions, similar to situational attributions, blaming oneself for negative partner behavior is not expected to influence the cognitive and

affective responses on the partner. However, self-blame for a partner negative behaviors may be the result of lower self-esteem, and therefore, these attributions may have an *indirect* effect on our variables of interest. Past research has shown that individuals with low self-esteem tend to exhibit lower commitment and trust, express less love for their partners, and preemptively protect themselves from rejection (e.g., Cavallo, Holmes, Fitzsimons, Murray, & Wood, 2012; Ford & Collins, 2010; Murray, Rose, Bellavia, Holmes, & Kusche, 2002). As such, it is possible that the PRQC index components of commitment, intimacy, trust, and love may mediate the link between self attributions for negative behaviors and relationship satisfaction.With the same rationale as indicated above, passion is not expected to mediate the relationship between situational and self attributions for negative behaviors and relationship satisfaction.

Interpersonal Qualities Scale. Developed by Murray and colleagues (2000), the IQS comprises positive and negative attributes (e.g., "kind and affectionate" and "thoughtless") and social characteristics (e.g., "sociable" and "lazy") that can use to describe oneself or ones partner. Past research has shown the IQS to be strongly related to relationship satisfaction (e.g., Murray, Holmes, & Griffin, 1996; Murray et al., 2000). In line with the present research's expectations that attributions for partner behavior may predict perceptions of their partners' relationship specific qualities, the IQS is expected to mediate the relationship between attributions and relationship satisfaction.

The general logic behind the expected mediating effects of the PRQC index components applies of the IQS as well. For positive behaviors, interpersonal and dispositional attributions are expected to positively predict IQS (Hypotheses 5a and 5b), while situational attributions are expected to negatively predict IQS (Hypothesis

5c). IQS is in turn expected to be positively related to relationship satisfaction. To elaborate, viewing one's partner's positive behavior as due to their partner's love for them and/or due to their partner being a good person is likely to positively influence intimates' perceptions of their partners' relationship specific qualities. Conversely, discounting their partners' positive behaviors by attributing them to situational factors is likely to negatively influence IQS.

For negative behaviors, interpersonal and dispositional attributions are expected to negatively predict IQS (Hypotheses 5d and 5e). Situational attributions are expected to positive predict IQS (Hypothesis 5f), while self attributions are expected to negative predict IQS (Hypothesis 5g). To elaborate, viewing one's partner's negative behavior as due to their partner's love for them and/or due to their partner being a good person is likely to negatively influence intimates' perceptions of their partners' relationship specific qualities. Conversely, discounting their partners' negative behaviors by attributing them to situational factors is likely to positively influence IQS. Lastly, blaming oneself for their partner's negative behaviors is likely to negatively influence IQS.

A Moderated-Mediation Model: The Moderating Effects of Growth

Although past research has studied the link between attributions and relationship satisfaction, researchers have yet to identify whether beliefs about romantic compatibility moderates the effects. Therefore, in addition to testing potential mediators that explain the direct effect between attributions and relationship satisfaction, the present research seeks to examine the moderating effects of implicit theories on the mediation chain. Implicit theories (Dweck, 1986) were originally developed to explore how people's beliefs about the malleability (vs. fixedness) of

personal attributes such as abilities, personality, and intelligence affect a range of outcomes, including persistence upon failure (Dweck & Leggett, 1988; Diener & Dweck, 1980) and recommendations for retribution vs. rehabilitation for offenders (Dweck, Chiu, & Hong, 1995). Dweck (1999) made the distinction between the endorsement of an *incremental* theory (i.e., the belief that human attributes can develop and change through a person's efforts) and an *entity* theory (i.e., the belief that human attributes are fixed and not subject to personal development).

While individuals may have general tendencies to view the world through incremental or entity lenses, implicit theories may differ from domain to domain (Molden & Dweck, 2006). Directly relevant to the current program of research, Knee (1998) distinguished between a belief in *growth* (i.e., viewing successful relationships as cultivated and developed through effort) and a belief in *destiny* (i.e., viewing romantic compatibility as fixed and potential relationship partners are either meant for each other or not).

The belief in growth has been shown to moderate the associations between various predictors and relationship outcomes (e.g., Cobb, DeWall, Lambert, & Fincham, 2013; Knee et al., 2001; Knee et al., 2004); but moderating effects of destiny were not found. For example, Knee and colleagues (2001) asked participants to rate their ideal and current partner to see if greater discrepancies between the two would negatively impact relationship satisfaction. Their findings generally supported their hypotheses, but with one notable exception – the negative impact of a large discrepancy between ideal mates and current partners was attenuated among those who had strong growth beliefs. In another example, Knee and colleagues (2004) found that growth beliefs buffered against the negative impact of relationship conflicts on commitment. It thus seems that growth serves a protective function by

minimizing the negative impact of predictors that were otherwise detrimental to relationship satisfaction. Taken together, it seems that growth provides relationship partners with relationship resilience, buffering against the effects of negative relationship events.

Drawing from these findings, the present research hypothesizes that a strong belief in growth may also moderate the effects of attributions on PRQC index components and IQS. As the same attributions can have divergent effects on relationship outcomes based on the valence of the partner behaviors in question, two types of moderating effects are hypothesized: buffering and enhancement. To elaborate, for attributions that would otherwise be detrimental to relationship satisfaction (e.g., when an intimate makes dispositional attributions for negative behavior), a stronger belief in growth is expected to reduce their negative impact. A belief in growth may help individuals view their partner's shortcomings as an obstacle that they can overcome together while striving to improve their relationship. Thus, for growth theorists, these "maladaptive" attributions are less likely to negatively impact their perceptions of partner suitability (i.e., the *buffering* hypothesis). In contrast, for attributions that have a positive impact of relationship satisfaction (e.g., when an intimate makes dispositional attributions for positive behavior), a stronger belief in growth is expected to augment their positive impact. Growth theorists are likely to strongly value the positive characteristics of their partners as this confirms their belief that they can work together with them to make their relationship a success. Thus, for growth theorists, these "adaptive" attributions are more likely to positively impact their perceptions of partner suitability (i.e., the *enhancement* hypothesis).

Moderating the effects of dispositional, situational and self attributions. Integrating the above rationale with existing research on the impact of attributions on

relationship outcomes, the belief in growth is expected to *buffer* the negative impact of: 1) situational attributions for positive behaviors (Hypothesis 6a); and 2) dispositional and self attributions for negative behaviors (Hypotheses 6b and 6c). In addition, the belief in growth is expected to enhance the positive impact of: 1) dispositional attributions for positive behaviors (Hypothesis 6d); and situational attributions for negative behaviors (Hypothesis 6e).

The present research presents a moderated mediation model as shown in Figure 2, with the belief in growth serving as a first-stage moderator. In developing the moderation hypotheses, the present research has also considered whether growth would serve as a second-stage rather than a first stage moderator. However, past findings have demonstrated strong and robust links for PRQC index components and IQS on relationship satisfaction (e.g., Ho, et al., 2012; Murray et al., 2001; Yoo, Bartle-Haring, Day, & Gangamma, 2014). It thus seems unlikely that those associations will be moderated by relationship beliefs.

Moderating the effect of interpersonal attributions. In contrast to the attributions discussed above, the present research hypothesizes that the belief in growth will not moderate the effects of interpersonal attributions for both positive and negative behaviors on PRQC index components and IQS. A belief in growth has been theorized to be adaptive in that when intimates encounters hardships and conflicts in their relationship, growth helps intimates see them as trials to be overcome in the pursuit of strengthening the relationship (Knee, 1998). However, when individuals are making interpersonal attributions for negative behaviors, the fundamental basis for striving for a happy relationship is absent; if the partner is perceived as unloving and uncaring towards them and/or the relationship, the motivation to work together towards a successful relationship is unlikely to be strong. Thus, a buffering effect of

growth is not expected for interpersonal attributions for negative behaviors (Hypothesis 7a). Similarly, when individuals are making interpersonal attributions for positive behaviors, it is clear that their partners are *already* cultivating a successful relationship; individuals can acknowledge that their relationship has *already* successfully overcame hardships and conflicts to arrive at its current state and bask in the partner's perceived love for the self and care towards the relationship. Thus, the enhancing effect of growth is not expected for interpersonal attributions for positive behaviors either (Hypothesis 7b).

In sum, the belief in growth is not irrational – individuals will only seek to improve a relationship with a partner who cares about the self and the relationship. Thus, when individuals perceive the partner's negative behaviors are caused by their lack of love for the self, a belief in growth cannot salvage the relationship. Also, conviction in the partner's love for the self is likely to have a strong link to PRQC index components and IQS, and thus, the rendering the belief that love can be cultivated irrelevant. Thus, the impact of interpersonal attributions on perceptions of partner suitability is not dependent on people's belief in growth.

Study 1

Overview

The primary objectives of Study 1 were: 1) To explore and confirm the factor structure of the expanded set of locus of causality attributions, with the specific aim of empirically distinguishing interpersonal attributions from internal (i.e., dispositional) and external (i.e., situational and self) attributions and; 2) Show that interpersonal attributions predict relationship satisfaction even after controlling for these attributions. As outlined in the hypotheses, interpersonal and dispositional attributions for *positive* behaviors, and situational attributions for *negative* behaviors, are expected to positively predict relationship satisfaction. In contrast, situational attributions for *positive* behaviors, and interpersonal, dispositional, and self attributions for *negative* behaviors, are expected to negatively predict relationship satisfaction. The effects of interpersonal attributions on relationship satisfaction are expected to remain, even after controlling for other attributions for the same behavior.

Methods

Participants. A total of 230 participants from Singapore Management University (SMU; 140 female) were recruited; only participants who completed both waves and were in the same relationship when completing both waves were included. Thus, out of the 230 participants, 55 participants were excluded (i.e., 29 did not complete both waves; 26 broke up or were in different relationships by Wave 2) leaving a sample of 175 participants. Sixteen additional participants were excluded for failing to follow instructions; they did not recall any behaviors (or recalled wrongly valenced behaviors) for which attributions needed to be made. The final sample consisted of 159 participants (101 female), who were involved in a romantic

relationship for at least three months, with a mean length of 22.6 months (*SD* = 17.3). The sample included Chinese (80%), Vietnamese (6%), Indian (6%), Malay (3%), and Myanmese (3%) participants, others (2%) with a mean age of 21.9 years (*SD* = 1.8). Participants were paid for their participation.

Procedure. A prospective two-wave design, with a 16-week interval was used. Wave 1 was completed at the start of the Fall semester (W1), and Wave 2 was completed four months later at the end of the same semester (W2). At each time period, participants were asked to recall a behavior that their partner exhibited in the last two months that made them happy (upset). They then answered a series of questions regarding their attributions and perceptions in response to the behavior they listed. Lastly, participants completed a scale which measured their perceived relationship satisfaction.

Measures. Unless otherwise stated, participants responded using a seven-point scale (1 = *not at all*, 7 = *very great extent*).

Description of partner's positive and negative behaviors. Participants were asked, "Please recall a behavior that your partner exhibited in the last two months that made you happy (upset)". Participants then typed a brief description of their partner's behavior in open-ended format. The order in which participants recalled the different valenced behaviors was randomized across participants.

Interpersonal attributions. The extent to which participants attributed their partners' positive (negative) behavior to interpersonal factors was assessed via a two-item interpersonal attribution scale (W1: $\alpha_{(happy)}$ = .81, $\alpha_{(upset)}$ = .87; W2: $\alpha_{(happy)}$ = .93, $\alpha_{(upset)}$ = .87). The items are as follows: "To what extent was the behavior a reflection of how your partner felt about you" and "To what extent was the behavior a reflection

of how your partner felt about the relationship". Scores were averaged across items to form an interpersonal attribution composite with higher scores indicting stronger interpersonal attributions.

Dispositional attributions. The extent to which participants attributed their partners' positive (negative) behavior to their partners' disposition was assessed via a three-item dispositional attribution scale (W1: $\alpha_{(happy)}$ = .87, $\alpha_{(upset)}$ = .89; W2: $\alpha_{(happy)}$ = .88, $\alpha_{(upset)}$ = .88). The items are as follows: "To what extent was the behavior a reflection of your partner's character?", "To what extent does the behavior reflect an enduring aspect of your partner's personality?", and "To what extent was the behavior due to something inside of your partner?" Scores were averaged across items to form a dispositional attribution composite with higher scores indicting stronger dispositional attributions.

Situational attributions. The extent to which participants attributed their partners' positive (negative) behavior to situational factors was assessed via a four-item situational attribution scale (W1: $\alpha_{(happy)}$ = .67, $\alpha_{(upset)}$ = .62; W2: $\alpha_{(happy)}$ = .73, $\alpha_{(upset)}$ = .63). The items are as follows: "To what extent was the behavior affected by circumstances that have nothing to do with the relationship?", "To what extent was the behavior affected by someone other than you?", "To what extent was the behavior affected by situational factors that were out of your control?", and "To what extent was the behavior affected by situational factors that were out of your partner's control". Scores were averaged across items to form a situational attribution composite with higher scores indicting stronger situational attributions.

Self attributions (negative). Participants were only asked to make self attributions for negative behaviors because it captures *self*-blame, which is not

applicable for positive behaivours. Self attributions were assessed via a four-item self attribution scale (W1: $\alpha_{(upset)}$ = .89; W2: $\alpha_{(upset)}$ = .89). The items are as follows: "To what extent were you responsible for the behavior?", "To what extent was the behavior a reflection of your character?", "To what extent does the behavior reflect an enduring aspect of your personality?", and "To what extent was the behavior due to something inside of you?". Scores were averaged across items to form a self attribution composite with higher scores indicting stronger self attributions.

Relationship satisfaction. Participants completed the five-item relationship satisfaction scale taken from Norton (1983). Sample items included, "We have a good romantic relationship", "My relationship with my partner is very stable", and "Our romantic relationship is strong" (W1: α = .93; W2: α = .93). Participants responded to each item using a seven-point scale (1 = *strongly disagree*, 7 = *strongly agree*). Scores across items were averaged with higher scores indicating greater relationship satisfaction.

Results

Table 2 presents the descriptive statistics and correlations of the variables used in Study 1.

Factor analyses. To determine the factor structure of the newly developed attribution measure, an Exploratory Factor Analyses (EFA) was conducted on W1. A Confirmatory Factor Analysis (CFA) was conducted on W2 to confirm this factor structure.

Exploratory factor analysis. Hypothesis 1a states that the EFA on the factor structure of Study 1 (W1) attributions is expected to yield seven distinct factors as

shown in Table 1. To test this hypothesis, a principle axis factor analysis was conducted on Study 1 (W1) attributions. The Kaiser-Meyer-Olkin measure was .65, above the recommended threshold of .60 (Kaiser, 1974) and the Bartlett's Test of Sphericity reached statistical significance, indicating that the inter-item correlations were sufficiently large for exploratory factor analysis.

A direct oblimin rotation was used specifying the extraction of seven factors that together, explained 72.23% of the variance. An oblimin rotation allows the factors to correlate, and this was used in the EFA because past research has shown that attributions for common events correlate significantly with one another (e.g., Fincham, 1985; Fincham & Bradbury, 1992). The number of factors was determined based on an inspection of the scree plot, eigenvalues, and cumulative variance. The full pattern matrix, item communalities, factor eigenvalues, and percentage of variance explained can be found in Table 3.

The factor structure generally fit the present research's proposed expanded set of locus attributions. All of the items loaded on their hypothesized factor with factor loadings above .30. More importantly, as expected, the interpersonal attribution items loaded on their own, forming two separate factors: interpersonal attributions for *positive* behaviors and interpersonal attributions for *negative* behaviors. Thus, the EFA on the W1 data provided initial empirical evidence that they can be distinguished from the other locus dimension attributions.

Confirmatory factor analysis. Hypothesis 1b states that the CFA on W2 attributions is expected to fit the factor structure as found via the EFA on W1 attributions. To test this hypothesis, a CFA using AMOS was conducted on W2 attributions. Table 4 shows the goodness-of-fit statistics and factor loadings of the

models tested. As expected, analyses showed that the data fit the proposed factor structure well, with good to moderate fit statistics, (χ^2 = 254.44, *df* = 188, $p < .01$; RMSEA = .06, CFI = .95), and good factor loadings above the .40 threshold. As with the EFA on W1 attributions, the CFA on W2 attributions showed that the interpersonal attribution items loaded highly onto their respective interpersonal attribution factors (factor loadings ranging from .85 to .97), once again differentiating them from the other locus dimension attributions.

Goodness-of-fit statistics for the proposed factor structure were also better than those for alternative models. To provide evidence that interpersonal attributions and dispositional attributions are empirically distinct, Alt Model #1 combined interpersonal and dispositional attributions for positive behaviors into one factor. The same was done for negative behaviors. Three additional factors are also included: situational attributions for positive and negative (2 factors), and self-attributions for negative behaviors. If this 5 factor model (Alt Model #1) fit the data better than the proposed model, it suggests that these two attributions may not be distinguishable within the perceiver's mind. The results showed that the fit was poorer than the theorized model, with unacceptable fit statistics ($\Delta\chi^2$= 189.21, $p < .01$, RMSEA = .10, CFI = .82). These results provide additional evidence that interpersonal and dispositional attributions tap into empirically distinct latent variables.

Alt Model #2 tested whether interpersonal attributions measured a latent variable other than attributions (for example, meta-cognition). Thus, in this alternative model, there are four factors: interpersonal attributions for positive and negative behaviors (2 factors), and other attributions for positive behaviors (i.e., situational and dispositional) and attributions for negative behaviors (i.e., situational,

dispositional, and self). If interpersonal attributions measures a variable other than attributions, then a model that separates interpersonal attributions from the more traditional attributions should fit better than a model that assumes that there are three different types of attributions at work (as did the original model). This is because situational and dispositional will tap into the same latent variable (i.e., attributions) and form one factor, whereas interpersonal attributions will tap into a different factor (e.g., meta-cognition). The results showed that the fit was poorer than the theorized model, with unacceptable fit statistics ($\Delta\chi^2 = 351.70$, $p < .01$, RMSEA = .13, CFI = .71). These results suggest that interpersonal attributions do not form a factor that is empirically distinct from the traditional measures of attribution (i.e., dispositional, situational, self).

Direct effects of attributions on relationship satisfaction. Table 5a shows the overall direct effect of the different attributions on relationship satisfaction. Regression analyses were first conducted to examine the *direct* effects of each attribution on relationship satisfaction to ascertain whether interpersonal attributions predict satisfaction, and to replicate past findings using the newly developed attribution measure. Controlling for relationship length did not materially alter any of the findings reported below.

Attributions for positive behaviors. Hypotheses 2a and 2b state that both interpersonal and dispositional attributions for positive behaviors will positively predict relationship satisfaction, while Hypothesis 2c states that situational attributions for positive behaviors will negatively predict relationship satisfaction. To test these hypotheses, attributions for positive behaviors were regressed on relationship satisfaction. As expected, W1 and W2 interpersonal attributions positively predicted both within and across wave relationship satisfaction (βs > .36, *p*s

< .01). Consistent with past literature (e.g., Fincham & Bradbury, 1992), W1 and W2 dispositional attributions also positively predicted within and across wave relationship satisfaction (βs > .28, ps < .01). In contrast, situational attributions displayed an inconsistent pattern, negatively predicting within W2 relationship satisfaction (β = -.17, p = .03), but not within W1 or across wave relationship satisfaction (-.03 < βs < .09, *n.s.*).

Attributions for negative behaviors. Hypotheses 2d, 2e, and 2g state that interpersonal, dispositional, and self attributions for negative behaviors will negatively predict relationship satisfaction, while Hypothesis 2f states that situational attributions for negative behaviors will positively predict relationship satisfaction. To test these hypotheses, attributions for negative behaviors were regressed on relationship satisfaction. As expected, W1 and W2 interpersonal attributions negatively predicted both within and across wave relationship satisfaction (βs < -.29, ps < .01). Consistent with past literature, W1 and W2 dispositional attributions also negatively predicted within and across wave relationship satisfaction (βs < -.25, ps < .01). In contrast, neither self attributions (-.09 < βs < .05, *n.s.*) nor situational attributions (-.05 < βs < .07, *n.s.*) were related to within or across wave relationship satisfaction.

Incremental effects of attributions on relationship satisfaction. After ascertaining the direct effects of interpersonal attributions on relationship satisfaction, additional regression analyses were conducted to examine the *incremental* effects of interpersonal attributions, over and above internal and external attributions. Table 5a provides a comparison between the direct and incremental effects of the different attributions on relationship satisfaction.

Attributions for positive behaviors. Hypotheses 3a states that when controlling for other attributions for the same behaviors, the effects of interpersonal attributions for positive behaviors on relationship satisfaction will remain significant. To test this hypothesis, a multiple regression was carried out. Other same valenced attributions were entered at Step 1 of the regression, while interpersonal attributions was entered at Step 2. Results show that as expected, interpersonal attributions continued to predict within and across wave relationship satisfaction even after controlling for dispositional and situational attributions (βs > .20, ps < .05).

Attributions for negative behaviors. Hypotheses 3b states that interpersonal attributions are not expected to predict relationship satisfaction after controlling for other attributions for the same behaviors. A multiple regression as mentioned above was conducted to tests this hypothesis. Contrary to expectations, interpersonal attributions continued to predict both within and across wave relationship satisfaction (βs < -.24, ps < .01).

Discussion

The results of Study 1 provided strong evidence that interpersonal attributions can be distinguished from dispositional, situational, and self attributions. First, the items measuring interpersonal attributions were empirically distinct from the other attributions as demonstrated through the EFA on W1 data, and CFA on W2 data. Second, interpersonal attributions were shown to have both direct and incremental predictive value on relationship satisfaction. Contrary to expectations, interpersonal attributions for negative behaviors largely continued to predict relationship satisfaction even after controlling for other attributions for the same behaviors. It thus seems that individuals are able to disentangle whether the partner's negative behavior

is due to his/her lack of love for the self versus due to his/her enduring disposition. These findings suggest that the inclusion of interpersonal attributions is a meaningful expansion on the locus dimension because it predicts relationship satisfaction *independently* from dispositional attributions. Thus, the assessment of *both* interpersonal attributions and dispositional attributions are needed to paint a complete picture of how attributions affect relationship satisfaction.

Interestingly, contradictory to past research (Bradbury and Fincham, 1990), situational and self attributions mostly failed to predict relationship satisfaction. One explanation for these inconsistencies could be how partner behaviors are operationalized. In Study 1, participants recalled a single partner behavior, which was then used as a target for participants' attributions. A content analysis of the recalled behaviors showed that the behaviors differed widely in terms of specificity (e.g., "She made breakfast for me on the weekend" vs. "He was nice to me"), intensity (e.g., "He cheated on me" vs. "He did not pay for my meal"), and frequency (e.g., "Getting a house together" vs. "Laughing at my jokes"). I thus conducted supplemental analyses, and found that controlling for the intensity (i.e., how positive or negative the behavior is) and frequency (i.e., how typical the behavior is) did not significantly affect the pattern of results. However, the usage of a standardized list of behaviors would meaningfully address this limitation, and give us greater clarity as to whether the findings regarding interpersonal attributions can be generalized beyond the positive/negative behavior that was easiest for participants to recall. This improvement will provide more clarity on the link relationship between attributions and relationship satisfaction.

Study 2

Overview

Study 2 was designed to address the limitation of asking participants to make attributions for only one positive and one negative partner behavior. Thus, instead of a single recalled behavior (i.e., one each for positive and negative), participants were given a list of positive and negative behaviors that were drawn from previous research, and asked to rate the frequency of each behavior. Participants were then asked to make attributions for the three most frequent positive (negative) behaviors to gather a more representative sample of the attributions made. Essentially, the goal of Study 2 was to provide further confirmatory evidence for the factor structure observed in Study 1, and replicate the incremental predictive value of interpersonal attributions on relationship satisfaction. The expected pattern of results is the same as that of Study 1.

Method

Participants. A total of 121 participants from SMU (81 female) were recruited to participate in the study. Participants were involved in a romantic relationship for at least three months, with a mean length of 19.0 months (*SD* = 22.7). The sample included Chinese (80%), Indian (7%), Malay (3%), and others (10%) with a mean age of 21.3 years (*SD* = 1.6). Participants received partial credit towards their psychology courses as compensation for their participation.

Procedure. In this cross-sectional study, participants were first asked to rate the frequency of various positive and negative partner behaviors that has been used in existing relationship research (Doss & Christenson, 2006). They were then presented

with three positive and three negative behaviors that they had personally rated as being the most frequent, and asked to respond to them using the same attribution measure used in Study 1. They then filled up the previously used perceived relationship satisfaction scale.

Measures. Measures used, with the exception of the relationship behaviors outlined below are identical to those used in Study 1.

Relationship behaviors. Participants were presented with 8 positive and 7 negative partner behaviors. These behaviors were adapted from Doss and Christensen's (2006) Frequent and Acceptability of Partner Behavior Inventory. Items were selected and adapted for their applicability to the specific dating student sample of the present research (i.e., excluding items that referenced behaviors more relevant for cohabitating or married couples; e.g., taking care of children, doing housework). Participants were asked to rate the frequency in which their partners had engaged in each behavior in the past month (1 = *never*, 7 = *several times a day*). Positive partner behaviors included being physically and verbally affectionate, being supportive, discussing problems, and running errands amongst others. Negative partner behaviors included being critical, dishonest, breaking promises, and invading privacy amongst others.

Results

Table 6 presents the descriptive statistics and correlations of the variables used in Study 2.

Confirmatory factor analysis. Replicating the results of the EFA and CFA in Study 1, the CFA conducted on Study 2 attributions showed that the data fit the

proposed factor structure well with good to moderate fit statistics and good factor loadings above the .40 threshold, χ^2 = 320.46, *df* = 188, *p* < .01; RMSEA = .08, CFI = .94. Interpersonal attribution items loaded highly onto their respective interpersonal attribution factors (factor loadings ranging from .93 to .98), providing further evidence of their existence as a separate factor. Table 4 shows the goodness-of-fit statistics and factor loadings of the original model, and the two alternative models tested. Again, the results suggest that the original theoretical model fit the data the best; both alternative model had unacceptable fit statistics (Alt Model #1: $\Delta\chi^2$= 314.64, *p* < .01, RMSEA = .14, CFI = .80; Alt Model #2: $\Delta\chi^2$ = 793.07, *p* < .01, RMSEA = .19, CFI = .58).

Direct effects of attributions on relationship satisfaction. The regressions testing the direct effects (without any control variables) were conducted in the same way as Study 1. Here again, controlling for relationship length did not significantly change any of the results below. Table 5b shows the overall direct effects of the different attributions on relationship satisfaction.

Attributions for positive behaviors. Replicating the results of Study 1, both interpersonal (β = .48, *p* < .01) and dispositional (β = .42, *p* < .01) attributions for positive behaviors positively predicted relationship satisfaction. In contrast, situational attributions for positive behavior were not related to relationship satisfaction (β = -.11, *p* = .24).

Attributions for negative behaviors. Replicating the results of Study 1, interpersonal attributions for negative behaviors negatively predicted relationship satisfaction (β = -.19, *p* = .04). However, dispositional, situational, and self

attributions were not significantly related to relationships satisfaction (-.06 < β < .02; *n.s.*).

Incremental effects of attributions on relationship satisfaction. To examine the incremental effects of each attribution, I controlled for the attributions for the same set of behaviors. Table 5b provides a comparison of the direct and incremental effects of the different types of attributions.

Attributions for positive behaviors. Replicating the results of Study 1, interpersonal attributions for positive behaviors continued to predict relationship satisfaction even after controlling for other attributions for the same set of behaviors (β = .37, p < .01).

Attributions for negative behaviors. Also replicating the results of Study 1, interpersonal attributions for negative behaviors continued to predict relationship satisfaction even after controlling for other attributions for the same set of behaviors (β = -.33, p = .01).

Discussion

The results of Study 2 generally replicate those observed in Study 1. First, the CFA on Study 2 attributions replicated the goodness of fit for the factor structure found in the EFA (W1) and CFA (W2) on Study 1 attributions. Second, interpersonal attributions for both positive and negative behaviors were once more shown to have both direct and incremental effects on relationship satisfaction. Third, situational and self attributions were once again found to be unrelated to relationship satisfaction. Taken together, the results of Study 1 and Study 2 provide strong evidence for the existence and utility of interpersonal attributions in the context of romantic

relationships. Although dispositional attributions are not the focus of the current research, dispositional attributions for negative behaviors did not have direct or incremental effects on relationship satisfaction in Study 2. This is contrary to the results of Study 1 and existing research. Given that Study 1 required participants to recall only one negative behavior, and past research used hypothetical negative behaviors (Fincham & Bradbury, 1992), it is possible that dispositional attributions predicted satisfaction only under those two circumstances. Study 3 largely utilizes the same design as Study 2, so it would be worthwhile to explore whether the lack of association between dispositional attributions for negative behaviors and relationship satisfaction is replicated with a different sample.

Study 3

Overview

Studies 1 and 2 demonstrated the unique effects of interpersonal attributions on relationship satisfaction. Thus, Study 3 was designed to explicate the underlying mechanism that explains the association between attributions and relationship satisfaction, and explore the boundary conditions of the mediation chain. A moderated-mediation model is proposed (see Figure 1).

First, the present research theorizes that attributions may be linked to relationship satisfaction through partner suitability judgments. That is, after individuals make an attribution about a positive or negative behavior, these attributions will directly influence the extent to which they perceive their partners to be suitable. Two potential manifestations of such judgments are identified: Perceived Relationship Quality Components (PRQC; Fletcher et al., 2001) and perceptions of partner (IQS; Murray et al., 2001). The PRQC index measures the relationship quality components of satisfaction, commitment, trust, intimacy, love, and passion, while the IQS comprises positive and negative attributes and social characteristics that can be used to describe ones partner. Both of these judgments are expected to mediate the relationship between attributions and relationship satisfaction for both positive and negative behaviors.

With regards to boundary conditions, the present research proposes that growth beliefs (i.e., believing that love is cultivated through effort) may moderate this mediation chain (see Figure 2). The *interpersonal* attributions-partner suitability judgments–relationship satisfaction chain is expected to be unaffected by growth. The premise is that interpersonal attributions already provide evidence that one's

partner does (or does not) love the self, and growth beliefs are not expected to moderate the impact of these attributions on partner suitability judgments. In contrast, the other attributions-partner suitability judgements-relationship chains are expected to be moderated by growth. The reason for this is that believing that love can be cultivated is expected to mitigate the negative effects of viewing that partner's behaviors are due to their poor disposition. This is based on the assumption that both partners can work together to make the relationship better (i.e., buffering effect); the same belief in growth is expected to enhance the positive effects of viewing that partner's behaviors are due to their superior disposition because a good partner is a solid foundation on which the two can work together to cultivate love through effort (i.e., enhancement effect). The same buffering and enhancing logic applies for the moderating effect of growth on the situational and self attributions-partner suitability judgements-relationship chains.

A secondary aim of Study 3 was to explicate the effects of attributions on relationship satisfaction by considering if partner suitability judgments also mediate the relationship between attributions and behaviors in close relationships. Given that relational schemas (Baldwin, 1992) capture the *interactions* between partners, it would be meaningful to explore how different attributions may predict the way intimates behave towards their partners. The present research thus adopts Peetz and Kammrath's (2011) promise making and keeping paradigm to see if attributions are able to influence the relationship behaviors via partner suitability judgments.

In their research, Peetz and Kammrath (2011) found that while positive feelings about one's partner or relationship predicted *promise making*, these feelings did not predict *promise keeping*. Instead, conscientiousness predicted promise keeping. Thus, in theorizing, I broke down the hypotheses for promise making vs.

promise making. For promise making, I predicted that adaptive attributions (i.e., interpersonal and dispositional attributions for *positive* behaviors and situational attributions for *negative* behaviors) may positively predict partner suitability judgments, and in turn, be positively associated with promise making (Supplementary Hypothesis 1). Conversely, maladaptive attributions (i.e., situational attributions for *positive* behaviors, and interpersonal, dispositional, and self attributions for *negative* behaviors) may *negatively* predict partner suitability judgments, and in turn, be *negatively* associated with promise making (Supplementary Hypothesis 2). For promise keeping, consistent with Peetz and Kammrath (2011), neither attributions nor partner suitability judgments were expected to have any effects (Supplementary Hypothesis 3).

Method

Participants. A total of 147 participants from SMU (109 female) were recruited. Out of the 147 participants, a total of four were excluded for having incomplete data, leaving a final sample of 143 (106 female). The remaining participants were involved in a romantic relationship for at least three months, with a mean length of 22.1 months (*SD* = 21.1). The sample included Chinese (80%), Vietnamese (6%), Indian (6%), Malay (3%), and Myanmese (3%) participants, others (2%) with a mean age of 21.6 years (*SD* = 1.7). Participants received partial credit towards their psychology courses for their participation.

Procedure. Study 3 adopted the promise making and keeping paradigm pioneered by Peetz and Kammrath (2011). This paradigm had a prospective two-wave design, administered two weeks apart. During Wave 1 (W1), participants came into the lab and rated the frequency of positive and negative partner behaviors then made

attributions for three most frequent ones as per Study 2. Participants also completed the PRQC index, IQS, implicit theories of relationships, and relationship satisfaction measures. Using the same instructions as Peetz and Kammrath (2001; Study 1) participants were then asked to identify a conflict in their relationship, and generated up to three behaviors they were willing to engage in the next two weeks to address the conflict. To make the promises more concrete, participants also rated the frequency to which they were willing to engage in each behavior. They then sent these promises to their partners via email. At the end of two weeks, participants were contacted once more and asked to rate the frequency in which they engaged in each of the promised behaviors. They also completed the PRQC index, IQS, implicit theories of relationships, and relationship satisfaction measures again.

Measures.

Perceived Relational Quality Component Index. The PRQC index developed by Fletcher and colleagues (2000) measures the components of satisfaction[1], commitment (W1: α = .96; W2: α = .96; e.g., "How committed are you to your relationship?"), intimacy (W1: α = .67; W2: α = .83; e.g., "How intimate is your relationship?"), trust (W1: α = .88; W2: α = .87; e.g., "How much do you trust your partner?"), passion (W1: α = .81; W2: α = .83; e.g., "How passionate is your relationship?"), and love (W1: α = .85; W2: α = .90; e.g., "How much do you love your partner?"). Participants responded to each item using a seven-point scale (1 = *not at all*, 7 = *extremely*). Scores were averaged across items within each component to form PRQC index component composites with higher scores indicting a greater level of commitment, intimacy, etc.

[1] In the present research, analyses are not carried out using the PRQC satisfaction component as its items directly overlap with some of those used in Norton's (1983) scale.

Interpersonal Qualities Scale. The IQS developed by Murray and colleagues (2000) is a 22-item scale comprising positive and negative attributes (e.g., "kind and affectionate" and "thoughtless") and social characteristics (e.g., "sociable" and "lazy"), and was used in the present research to describe ones partner's relationship specific qualities (W1: α = .85; W2: α = .88). Participants rated the extent to which their partner currently possessed each of the 22 attributes/characteristics using a ten-point scale (1 = *very*, 7 = *very much*). Negative attributes/characteristics were reverse coded, and items averaged to form an IQS composite with higher scores indicating more desirable partner relationship specific qualities.

Implicit theories of relationships. Participants completed the 22-item Implicit Theories of Relationships scale taken from Knee, and colleagues (2003). Eleven items assessed growth beliefs (W1: α = .80; W2: α = .83; e.g., "The ideal relationship develops over time", "A successful relationship evolves through hard work and resolution of incompatibilities", and "A successful relationship is mostly a matter of learning to resolve conflicts with a partner") while another 11 items assessed destiny beliefs (W1: α = .90; W2: α = .94; e.g., "Potential relationship partners are either compatible or they are not", "A successful relationship is mostly a matter of finding a compatible partner right from the start", and "Potential relationship partners are either destined to get along or they are not"). Participants responded to each item using a seven-point scale (1 = *strongly disagree*, 7 = *strongly agree*). Scores within the growth and destiny subscales were averaged to give each participant a growth and a destiny score. Higher scores indicated a greater endorsement of growth/destiny relationship beliefs.

Conflict report. In this conflict report, participants were asked to identify and elaborate on a source of conflict in their relationship. Specifically, they were asked to

"identify something about yourself (habits/opinions/behaviors) that upset your partner in the past two months", then to describe the problem in general terms before describing a specific instance in which the problem led to a conflict.

Structured promise form. In the promise form, participants were asked to generate several promises to their romantic partner that they will be willing to commit to doing. Specifically, they will be told to "Imagine up to three specific behaviors that you will be willing to commit to doing over the next 2 weeks to improve the conflict", and to list concrete, repeatable behaviors that can be initiated by them. For each behavior, participants were asked how frequently they wanted to promise to do it (1 – once in the next 14 days, 2 – twice in the next 14 days, 3 – three times in the next 14 days, and so on, until 14 – every day in the next 14 days, 15 – twice every day in the next 14 days, and 16 – several times a day in the next 14 days). They then made the promises to their partner by copying them into an email and sending them to their partner. This served as a measure of promise making.

Promise keeping. Two weeks after completing the first wave, participants received an email prompting them to indicate the extent to which they engaged in the positive and negative behaviors promised to their partners (0 – not at all in the last 14 days, 1 = once in the last 14 days to 16 = several times a day in the last 14 days). Promise keeping was measured by subtracting the actual frequency from the promised frequency for each behavior and averaging them across behaviors as per Peetz and Kammrath (2011).

Results

Table 7 presents the descriptive statistics and correlations of the variables used in Study 3. Again, consistent with Studies 1 and 2, regression analyses testing the

direct relationship between attributions and relationship satisfaction without any control variables were conducted. Subsequently, the incremental effects of attributions on relationship satisfaction were examined. Table 5b shows the overall direct and incremental effects of attributions on relationship satisfaction. Controlling for relationship length did not significantly change any of the results below.

Direct effects of attributions on relationship satisfaction.

Attributions for positive behaviors. Replicating the results of the other two studies, both interpersonal ($\beta s > .41$, $p < .01$) and dispositional ($\beta > .26$, $p < .01$) attributions for positive behaviors positively predicted both within and across wave relationship satisfaction. In contrast, situational attributions displayed an inconsistent pattern, significantly predicting wave 2 ($\beta = -.20$, $p = .02$), but only marginally predicting within wave relationship satisfaction ($\beta = -.15$, $p = .07$).

Attributions for negative behaviors. Replicating the results of the other two studies, both interpersonal ($\beta s < -.18$, $p < .05$) and dispositional ($\beta < -.27$, $p < .01$) attributions for negative behaviors negatively predicted both within and across wave relationship satisfaction, while situational attributions were not related to relationship satisfaction ($-.07 < \beta < .04$; *n.s.*). Unlike the results of the other two studies however, self attributions for negative behavior were found to negatively predict within and across wave relationship satisfaction ($\beta s < -.20$, $p < .05$).

Incremental effects of attributions on relationship satisfaction.

Attributions for positive behaviors. Replicating the results of the other two studies, interpersonal attributions for positive behaviors continued to predict

relationship satisfaction even after controlling for other attributions for the same set of behaviors ($\beta s > .34$, $p < .01$).

Attributions for negative behaviors. Contrary to the results of Studies 1 and 2 however, interpersonal attribution for negative behaviors no longer predicted relationship satisfaction after controlling for other attributions for the same set of behaviors ($\beta s = .01$, *n.s.*).

Mediators of the link between attributions and relationship satisfaction. Model 4 of the PROCESS macro was used to test the hypothesized mediation chains. Wave 1 attributions were used as independent variables, while W2 PRQC index and IQS, and relationship satisfaction were used as mediators and outcomes variables respectively. Table 8 presents the overview of the mediation analyses for PRQC and IQS.

PRQC index.

Interpersonal attributions for positive behaviors. Hypothesis 4a states that commitment, trust, intimacy, and love (but not passion) are expected to mediate the positive association between interpersonal attributions for positive behaviors and relationship satisfaction. Results showed that as hypothesized, the four PRQC index components emerged as mediators. Participants' interpersonal attributions for positive behaviors positively predicted their levels of commitment ($B = .38$, $t(141) = 3.81$, $p < .01$, CI[.18, .58], $R^2 = .09$), trust ($B = .44$, $t(141) = 4.87$, $p < .01$, CI[.26, .61], $R^2 = .14$), intimacy ($B = .49$, $t(141) = 5.50$, $p < .01$, CI[.31, .66], $R^2 = .18$), and love ($B = .41$, $t(141) = 5.22$, $p < .01$, CI[.26, .57], $R^2 = .16$). Levels of commitment ($B = .71$, $t(140) = 11.37$, $p < .01$, CI[.58, .83]), trust ($B = .42$, $t(140) = 4.76$, $p < .01$, CI[.25,

.60]), intimacy (B = .66, t(140) = 8.34, p < .01, CI[.51, .82]), and love (B = .67, t(140) = 7.29, p < .01, CI[.49, .85]) in turn positively predicted relationship satisfaction.

More importantly, the indirect effect of interpersonal attributions on relationship satisfaction was significant for commitment (β = .27, CI[.15, .41], κ^2 = .23, CI[.12, .32], R^2 = .13), trust (β = .18, CI[.10, .32], κ^2 = .14, CI[.06, .24], R^2 = .10), intimacy (β = .32, CI[.19, .47], κ^2 = .25, CI[.13, .38], R^2 = .14), and love (β = .29, CI[.19, .42], κ^2 = .22, CI[.12, .33], R^2 = .13). Unexpectedly, passion also mediated the relationship between interpersonal attributions and relationship satisfaction (β = .08, CI[.03, .18], κ^2 = .07, CI[.02, .14], R^2 = .05). Participants' interpersonal attributions for positive behaviors positively predicted their levels of passion (B = .43, t(141) = 3.06, p < .01, CI[.15, .70], R^2 = .06). Passion in turn positively predicted relationship satisfaction (B = .20, t(140) = 3.31, p < .01, CI[.08, .31]).

Dispositional attributions for positive behaviors. Hypothesis 4b states that commitment, trust, intimacy, and love (but not passion) are expected to mediate the positive association between dispositional attributions for positive behaviors and relationship satisfaction. Results showed that as hypothesized, the four PRQC index components emerged as mediators. Participants' dispositional attributions for positive behaviors positively predicted their levels of commitment (B = .20, t(141) = 2.13, p = .04, CI[.01, .39], R^2 = .03), trust (B = .18, t(141) = 2.07, p = .04, CI[.01, .36], R^2 = .03), intimacy (B = .31, t(141) = 3.57, p < .01, CI[.14, .48], R^2 = .08), and love (B = .19, t(141) = 2.37, p = .02, CI[.03, .34], R^2 = .04). Levels of commitment (B = .75, t(140) = 12.16, p < .01, CI[.63, .87]), trust (B = .50, t(140) = 5.90, p < .01, CI[.33, .67]), intimacy (B = .71, t(140) = 9.34, p < .01, CI[.56, .86]), and love (B = .73, t(140) = 8.46, p < .01, CI[.56, .90]) in turn positively predicted relationship satisfaction.

More importantly, the indirect effect of dispositional attributions on relationship satisfaction was significant for commitment (β = .15, CI[.00, .30], κ^2 = .15, CI[.01, .27], R^2 = .05), trust (β = .09, CI[.02, .19], κ^2 = .08, CI[.01, .17], R^2 = .04), intimacy (β = .22 CI[.08, .36], κ^2 = .20, CI[.07, .34], R^2 = .06), and love (β = .14, CI[.01, .27], κ^2 = .12, CI[.03, .27], R^2 = .05). Unexpectedly however, passion was also found to mediate the relationship between dispositional attributions and relationship satisfaction (β = .10, CI[.04, .21], κ^2 = .08, CI[.03, .17], R^2 = .04). Participants' dispositional attributions for positive behaviors positively predicted their levels of passion (B = .46, t(141) = 3.60, p < .01, CI[.21, .71], R^2 = .08). Passion in turn positively predicted relationship satisfaction (B = .22, t(140) = 3.52, p < .01, CI[.10, .35]).

Situational attributions for positive behaviors. Hypothesis 4c states that commitment, trust, intimacy, and love (but not passion) are expected to mediate the negative association between situational attributions for positive behaviors and relationship satisfaction. Results showed that out of the four PRQC index components, trust, intimacy, and love (but not commitment) emerged as mediators. Participants' situational attributions for positive behaviors negatively predicted their levels of intimacy (B = -.15, t(141) = -2.31, p = .02, CI[-.28, -.02], R^2 = .04) and love (B = -.13, t(141) = -2.17, p = .03, CI[-.24, -.01], R^2 = .03), and marginally negatively predicted their levels of trust (B = -.12, t(141) = -1.87, p = .06, CI[-.25, .01], R^2 = .02). Levels of trust (B = .51, t(140) = 6.01, p < .01, CI[.35, .68]), intimacy (B = .72, t(140) = 9.70, p < .01, CI[.57, .87]), and love (B = .75, t(140) = 8.59, p < .01, CI[.58, .92]) in turn positively predicted relationship satisfaction.

More importantly, the indirect effect of situational attributions on relationship satisfaction was significant for trust (β = -.06, CI[-.15, -.00], κ^2 = .07, CI[.01, .18], R^2

= .02), intimacy (β = -.11, CI[-.24, -.01], κ^2 = .14, CI[.01, .32], R^2 = .03), and love (β = -.09, CI[-.21, -.01], κ^2 = .12, CI[.02, .26], R^2 = .03). As expected, passion did not mediate the relationship between situational attributions and relationship satisfaction (β = -.03, κ^2 = .04, R^2 = .01; *n.s.*). Contrary to expectations, commitment did not emerge as a mediator (β = -.08, κ^2 = .11, R^2 = .03; *n.s.*).

Interpersonal attributions for negative behaviors. Hypothesis 4d states that commitment, trust, intimacy, and love (but not passion) are expected to mediate the negative association between interpersonal attributions for negative behaviors and relationship satisfaction. Results showed that out of the four PRQC index components, trust and love (but not commitment and intimacy) emerged as mediators. Participants' interpersonal attributions for negative behaviors positively predicted their levels of trust (B = -.12, t(141) = -2.44, p = .02, CI[-.21, -.02], R^2 = .04) and love (B = -.11, t(141) = -2.58, p = .01, CI[-.20, -.03], R^2 = .05). Levels of trust (B = .52, t(140) = 5.95, p < .01, CI[.35, .69]) and love (B = .75, t(140) = 8.56, p < .01, CI[.58, .93]) in turn positively predicted relationship satisfaction.

More importantly, the indirect effect of interpersonal attributions on relationship satisfaction was significant for trust (β = -.06, CI[-.11, -.02], κ^2 = .09, CI[.03, .18], R^2 = .03) and love (β = -.08, CI[-.14, -.04], κ^2 = .14, CI[.06, .24], R^2 = .03). As expected, passion did not mediate the relationship between interpersonal attributions and relationship satisfaction (β = -.02, κ^2 = .03, R^2 = .01; *n.s.*). Contrary to expectations, commitment (β = -.06, κ^2 = .11, R^2 = .02; *n.s.*) and intimacy (β = -.06, κ^2 = .10, R^2 = .02; *n.s.*) did not emerge as mediators.

Dispositional attributions for negative behaviors. Hypothesis 4e states that commitment, trust, intimacy, and love (but not passion) are expected to mediate the

negative association between dispositional attributions for negative behaviors and relationship satisfaction. Results showed that out of the four PRQC index components, commitment, trust, and love (but not intimacy) emerged as mediators. Participants' dispositional attributions for negative behaviors negatively predicted their levels of commitment (B = -.14, t(141) = -2.30, p = .02, CI[-.26, -.02], R^2 = .04), trust (B = -.13, t(141) = -2.33, p = .02, CI[-.25, -.02], R^2 = .04), and love (B = -.13, t(141) = -2.58, p = .01, CI[-.23, -.03], R^2 = .05). Levels of commitment (B = .74, t(140) = 12.09, p < .01, CI[.62, .87]), trust (B = .50, t(140) = 5.82, p < .01, CI[.33, .67]), and love (B = .73, t(140) = 8.40, p < .01, CI[.56, .90]) in turn positively predicted relationship satisfaction.

More importantly, the indirect effect of dispositional attributions on relationship satisfaction was significant for commitment (β = -.11, CI[-.19, -.03], κ^2 = .16, CI[.05, .27], R^2 = .05), trust (β = -.07, CI[-.14, -.02], κ^2 = .09, CI[.02, .18], R^2 = .04), and love (β = -.10, CI[-.15, -.03], κ^2 = .13, CI[.04, .22], R^2 = .05). As expected, passion did not mediate the relationship between dispositional attributions and relationship satisfaction (β = -.00, κ^2 = .00, R^2 = .00; *n.s.*) Contrary to expectations, intimacy did not emerge as a mediator (β = -.06, κ^2 = .08, R^2 = .03; *n.s.*).

Situational attributions for negative behaviors. Hypothesis 4f states that commitment, trust, intimacy, and love (but not passion) are expected to mediate the link between situational attributions for negative behaviors and relationship satisfaction. Contrary to expectations however, none of the PRQC index components emerged as mediators (-.01 < β < .03, κ^2 < .04, R^2 < .01; *n.s.*).

Self attributions for negative behaviors. Hypothesis 4g states that commitment, trust, intimacy, and love (but not passion) are expected to mediate the

link between self attributions for negative behaviors and relationship satisfaction. Contrary to expectations however, none of the PRQC index components emerged as mediators (-.08 < β < -.02, κ^2 < .10, R^2 < .04; *n.s.*).

IQS.

Interpersonal attributions for positive behaviors. Hypothesis 5a states that IQS is expected to mediate the relationship between interpersonal attributions for positive behaviors and relationship satisfaction. As expected, IQS emerged as a mediator. Interpersonal attributions for positive behavior positively predicted IQS (*B* = .43, *t*(141) = 5.92, *p* < .01, CI[.29, .58], R^2 = .20). IQS in turn positively predicted relationship satisfaction (*B* = .60, *t*(140) = 5.63, *p* < .01, CI[.39, .81]). More importantly, the indirect effect of interpersonal attributions on relationship satisfaction was also significant (β = .26, CI[.16, .42], κ^2 = .19, CI[.12, .28], R^2 = .13).

Dispositional attributions for positive behaviors. Hypothesis 5b states that IQS is expected to mediate the relationship between dispositional attributions for positive behaviors and relationship satisfaction. As expected, IQS emerged as a mediator. Dispositional attributions for positive behavior positively predicted IQS (*B* = .26, *t*(141) = 3.65, *p* < .01, CI[.12, .41], R^2 = .09). IQS in turn positively predicted relationship satisfaction (*B* = .68, *t*(140) = 6.71, *p* < .01, CI[.48, .88]). More importantly, the indirect effect of dispositional attributions on relationship satisfaction was also significant (β = .18, CI[.09, .31], κ^2 = .15, CI[.07, .25], R^2 = .06).

Situational attributions for positive behaviors. Hypothesis 5c states that IQS is expected to mediate the relationship between situational attributions for positive behaviors and relationship satisfaction. As expected, IQS emerged as a mediator. Situational attributions for positive behavior positively predicted IQS (*B* = -.12, *t*(141)

= -2.29, p = .02, CI[-.23, -.02], R^2 = .04). IQS in turn positively predicted relationship satisfaction (B = .70, t(140) = 7.09, p < .01, CI[.50, .89]). More importantly, the indirect effect of dispositional attributions on relationship satisfaction was also significant (β = -.09, CI[-.18, -.00], κ^2 = .10, CI[.01, .21], R^2 = .03).

Attributions for negative behaviors. Hypotheses 5d – 5g state that IQS is expected to mediate the relationship between *interpersonal*, *dispositional*, *situational*, and *self* attributions for negative behaviors and relationship satisfaction. Contrary to the hypotheses, IQS did not emerge as a mediator for interpersonal, situational, and self attributions (-.08 < β < .02, κ^2 < .09, R^2 < .03; *n.s.*). IQS only mediated the relationship between *dispositional attributions* for negative behaviors and relationship satisfaction. Dispositional attributions for negative behavior negatively predicted IQS (B = -.23, t(141) = -3.07, p < .01, CI[-.37, -.08], R^2 = .06). IQS in turn positively predicted relationship satisfaction (B = .43, t(140) = 6.75, p < .01, CI[.31, .56]). More importantly, the indirect effect of dispositional attributions on relationship satisfaction was also significant (β = -.12, CI[-.21, -.06], κ^2 = .16, CI[.07, .26], R^2 = .06).

Supplemental Mediation Analyses: Alternative Models. Existing research on attributions and satisfaction largely assume that attributional patterns predict satisfaction (e.g., Fincham & Bradbury, 1992). Thus, interventions have been developed to improve relationship satisfaction through counselling couples on how to make more adaptive attributions. However, these studies are generally cross-sectional in nature, and compare the attributional patterns of distressed and non-distressed couples (e.g., Fincham, 1985; Fincham et al., 1987; Fincham et al., 2000). Therefore, the causal direction of the attribution – relationship satisfaction association has never been empirically established. Although two of the studies in the present research were prospective designs, the interval between waves (Study 1: two months; Study 3:

two weeks) is not adequate in establishing causation. However, by testing alternative mediation models, it can determine if the theorized model fits the data better than alternative models. Thus, three alternative models were tested. Tables 9a – 9c provide an overview of the results.

Alternative mediation #1. The first iteration tested whether attributions mediated the link between partner suitability judgments and relationship satisfaction. This was done to establish the direction of causality between attributions and partner suitability judgments in the mediation chain. If this alternative mediation chain is largely significant as well, it could mean that attributions and partner suitability judgments are mutually reinforcing. Analyses showed that other than interpersonal attributions for positive partner behaviors, the other attributions did not emerge as significant mediators.

Alternative mediation #2. The second iteration tested whether relationship satisfaction mediated the relationship between attributions and partner suitability judgments. If this alternative mediation chain is largely significant, it may mean that relationship satisfaction serves as both an *outcome* and a *predictor* of attributions and partner suitability judgment. However, the mediation analyses showed that this was not the case. Other than the relationship satisfaction-dispositional attributions for positive behavior-passion mediation chain, all other mediation chains were not significant.

Alternative mediation #3. The third iteration tested whether relationship satisfaction mediated the relationship between partner suitability judgments and attributions. If this alternative mediation chain is largely significant, it may mean that attributions serve as both the *predictors* and the *outcomes* of partner suitability

judgments and relationship satisfaction. Analyses showed that a large number of these alternative mediation chains were significant for interpersonal and dispositional attributions for both positive and negative behaviors. Taken together with the support for the original theorized mediation model, these findings suggest that attributions, PRQC/IQS and satisfaction are mutually reinforcing. I will further discuss the implications of this finding in the Discussion section.

The moderating effects of growth. To test the full proposed moderated-mediation theoretical model, multiple regressions were conducted to examine the moderating effects of growth on the relationship between attributions and partner suitability judgments. At step 1, attribution, growth, and destiny composites were entered. At step 2, the interaction term between the target attribution and growth was added. Table 11 presents the overview of the moderation analyses.

The buffering effects of growth. Hypotheses 6a – 6c state that growth is expected to buffer against the negative impact that maladaptive attributions (i.e., situational attributions for positive behaviors, and dispositional and self attributions for *negative* behaviors) may have on partner suitability judgments.

Situational attributions for positive behaviors. As expected, growth moderated the effects of *situational* attributions for positive behaviors on commitment ($\beta = .16$, $p = .045$, $\Delta R^2 = .03$), trust ($\beta = .19$, $p = .02$, $\Delta R^2 = .04$), intimacy ($\beta = .25$, $p < .01$, $\Delta R^2 = .06$), and love ($\beta = .18$, $p = .03$, $\Delta R^2 = .03$). Contrary to expectations however, growth did not moderate the effects of situational attributions for positive behaviors on IQS ($\beta = .13$, $p = .11$, $\Delta R^2 = .02$).

Dispositional attributions for negative behaviors. Contrary to expectations, growth did not moderate the effects of dispositional attributions for negative behaviors for any of the partner suitability judgments (-.07 < β < .09; *n.s.*).

Self attributions for negative behaviors. As expected, growth moderated the effects of *self* attributions for negative behaviors on commitment (marginal; β = .15, p = .08, ΔR^2 = .02), trust (marginal; β = .16, p = .05, ΔR^2 = .03), intimacy (β = .20, p = .02, ΔR^2 = .04), love (β = .19, p = .02, ΔR^2 = .04), and IQS (β = .24, p < .01, ΔR^2 = .05).

Nature of moderation. Analyses of simple slopes showed that as expected, growth buffered against the negative impact of making situational attributions for positive behaviors and self attributions for negative behaviors. Specifically, for intimates with a weak growth belief, situational attributions for positive behaviors (βs < .24, *ps* < .05), and self attributions for negative behaviors (βs < .21, *ps* < .06), were negatively related to partner suitability judgments. However, these relationships were attenuated for those with a strong growth belief [situational attributions for positive behaviors (-.02 < β < .01; *ps* > .76); self attributions for negative behaviors (βs < .15; *ps* > .21)]. Refer to Figure 3 for the graphical representations.

The enhancing effects of growth. Hypotheses 6d and 6e state that growth is expected to enhance the positive impact that adaptive attributions (i.e., dispositional attributions for *positive* behaviors and situational attributions for *negative* behaviors) have on partner suitability judgments.

Dispositional attributions for positive behaviors. As expected, growth moderated the effects of dispositional attributions for positive behaviors on commitment (β = .28, p <.01, ΔR^2 = .08), trust (β = .20, p = .02, ΔR^2 = .04), intimacy

(β = .25, p <.01, ΔR^2 = .06), love (β = .24, p <.01, ΔR^2 = .06), and IQS (β = .26, p <.01, ΔR^2 = .06).

Situational attributions for negative behaviors. Growth also moderated the effects of situational attributions for negative behaviors on trust (marginal; β = .15, p = .07, ΔR^2 = .02), love (β = .22, p = .02, ΔR^2 = .04), and IQS (marginal; β = .16, p = .05, ΔR^2 = .03). Contrary to expectations, growth did not moderate the effects of situational attributions for negative behaviors on commitment (β = .11, p = .20, ΔR^2 = .01) and intimacy (β = .08, p = .35, ΔR^2 = .01).

Nature of moderation. Analyses of simple slopes showed that as expected, growth enhanced the positive effects of dispositional attributions for positive behaviors. Specifically, for intimates with a weak growth belief, dispositional attributions for positive behaviors were not related to partner suitability judgments (-.09 < β < .12; ps > .40). However, this relationship was positive and significant for those with a strong growth belief (βs > .40; ps < .01). Contrary to expectations however, analyses of simple slopes showed that situational attributions for negative behaviors were not related to trust or IQS at 1 *SD* above and below the mean. Also, instead of an enhancement effect, growth was shown to buffer against the negative effects of making less situational attributions for negative behaviors on love. Specifically, for intimates with a weak growth belief, situational attributions for positive behaviors were negatively related to love (β = -.17, ps = .04). However, this effect was attenuated for those with a strong growth belief (β = .15, ps = .09). Refer to Figure 3 for the graphical representations.

Moderating effects of growth and interpersonal attributions. Hypotheses 7a and 7b state that growth is not expected to moderate the effects of interpersonal attributions for both positive and negative behavior on partner suitability judgments.

Results showed that as expected, growth did not moderate the effects of interpersonal attributions for *positive* behavior on partner suitability judgments (βs < .14; *n.s.*). Growth also did not moderate the effects of interpersonal attributions for *negative* behavior on trust, intimacy, and IQS (βs < .13; *n.s.*). Contrary to expectations however, growth marginally moderated the effects of interpersonal attributions for *negative* behavior on commitment (β = .16, p = .06, ΔR^2 = .02) and significantly moderated the effect on love (β = .17, p = .05, ΔR^2 = .03).

Nature of moderation. Analyses of simple slopes showed that growth buffered against the negative impact of making interpersonal attributions for negative behaviors. Specifically, for intimates with a weak growth belief, interpersonal attributions for negative behaviors were negatively related to commitment (β = -.21, p = .02) and love (β = -.23, p < .01). However, these relationships were attenuated for those with a strong growth belief [commitment (β = -.00, p = .94); love (β = -.05; p = .37)]. Refer to Figure 4 for the graphical representations. It thus seems that even though the link between interpersonal attributions for positive behavior and partner suitability judgments are particularly strong such that growth is unable to further enhance its effects, growth may be able to buffer against some of the negative impacts of interpersonal attributions for negative behaviors.

The moderated-mediation model. Combining the mediation and moderation analyses, a moderated-mediation model is tested, where growth is expected to be a first stage moderator of the mediation chain linking attributions, partner suitability

judgments, and relationship satisfaction for all except interpersonal attributions. Model 7 of the PROCESS macro is used to test these hypothesized moderated mediations. Table 12 presents the overview of the moderated mediations.

Results showed that the moderated mediation was significant for *dispositional attribution*s for positive behaviors on commitment (*B* = .34, CI[.13, .61]), trust (*B* = .16, CI[.02, .41]), intimacy (*B* = .28, CI[.02, .64]), love (*B* = .25, CI[.06, .50]), and IQS (*B* = .23, CI[.07, .40]). Growth was also shown to be a first stage moderator of the *situational* attributions for positive behaviors, partner suitability judgments, and relationship satisfaction mediation chain for trust (*B* = .10, CI[.00, .25]) and intimacy (*B* = .19, CI[.02, .36]). The moderated mediation was also significant for *situational* attributions for negative behaviors on love (*B* = .19, CI[.07, .34]) and for *self* attributions for negative behaviors on commitment (*B* = .15, CI[.01, .35]), trust (*B* = .12, CI[.00, .26]), intimacy (*B* = .20, CI[.06, .38]), love (*B* = .17, CI[.05, .34]), and IQS (*B* = .19, CI[.05, .37]). The moderated mediation was not significant for any of the other attributions and partner suitability judgments not mentioned above. Also as expected, the moderated mediation model did not apply to interpersonal attributions for both positive and negative behaviors.

Supplementary mediation analyses for promise making and promise keeping. Supplementary analyses were also conducted to examine the mediating effects of attributions on promise making and promise keeping behaviors. As promise making was measured at W1, W1 PRQC index components and IQS were used instead.

Supplementary Hypothesis 1 focuses on adaptive attributions and states that interpersonal and dispositional attributions for positive behaviors as well as situational

attributions for negative behaviors are expected to positively predict promise making via their effects on PRQC index components and IQS. Tables 10a and 10b present the overview of the supplementary mediations.

Interpersonal attributions for positive behaviors. As expected, commitment (β = .10, CI[.05, .18], κ^2 = .10, CI[.05, .17], R^2 = .03), trust (β = .10, CI[.03, .20], κ^2 = .09, CI[.02, .18], R^2 = .03), intimacy (β = .17, CI[.06, .30], κ^2 = .14, CI[.06, .24], R^2 = .04), and love (β = .09, CI[.03, .18], κ^2 = .09, CI[.03, .16], R^2 = .03) as well as IQS (β = .11, CI[.03, .21], κ^2 = .10, CI[.03, .19], R^2 = .03) mediated the effects of interpersonal attributions for positive behaviors on promise making.

Dispositional attributions for positive behaviors. As expected, trust (β = .06, CI[.02, .15], κ^2 = .06, CI[.02, .13], R^2 < .01), intimacy (β = .11, CI[.05, .20], κ^2 = .11, CI[.06, .20], R^2 < .01), and love (β = .05, CI[.01, .11], κ^2 = .05, CI[.01, .12], R^2 < .01) as well as IQS (β = .08, CI[.03, .15], κ^2 = .08, CI[.03, .15], R^2 < .01) also mediated the effects of dispositional attributions for positive behaviors on promise making. Contrary to expectations however, commitment did not emerge as a mediator (β = .04, κ^2 = .04, R^2 < .01; *n.s.*).

Situational attributions for negative behaviors. Contrary to expectations, only trust (β = .04, CI[.00, .10], κ^2 = .04, CI[.01, .10], R^2 < .01) mediated the effects on situational attributions for negative behaviors on promise making. The other PRQC index components and IQS did not emerge as mediators (-.01 < β < .03, κ^2 < .03, R^2 < .01; *n.s.*).

Supplementary Hypothesis 2 focuses on *maladaptive* attributions and states that situational attributions for positive behaviors, and interpersonal, dispositional,

and self attributions for negative behaviors are expected to negatively predict promise making via their effects on PRQC index components and IQS.

Situational attributions for positive behaviors. Of the proposed mediators, only intimacy (β = -.08, CI[-.17, -.03], κ^2 = .08, CI[.03, .16], R^2 = .02), love (β = -.05, CI[-.11, -.01], κ^2 = .05, CI[.01, .12], R^2 = .01), and IQS (β = -.06, CI[-.13, -.02], κ^2 = .06, CI[.02, .13], R^2 = .01) mediated the effects of situational attributions for positive behaviors on promise making. Contrary to expectations, commitment (β = -.04, κ^2 = .04, R^2 = .01; *n.s.*) and trust (β = -.03, κ^2 = .03, R^2 = .01; *n.s.*) did not emerge as mediators.

Interpersonal attributions for negative behaviors. Of the proposed mediators, only intimacy (β = -.07, CI[-.15, -.02], κ^2 = .07, CI[.02, .15], R^2 < .01), love (β = -.06, CI[-.12, -.02], κ^2 = .06, CI[.02, .13], R^2 < .01), and IQS (β = -.07, CI[-.14, -.02], κ^2 = .07, CI[.02, .14], R^2 = .01) mediated the effects of interpersonal attributions for negative behaviors on promise making. Contrary to expectations, commitment (β = -.04, κ^2 = .04, R^2 < .01; *n.s.*) and trust (β = -.03, κ^2 = .03, R^2 < .01; *n.s.*) did not emerge as mediators.

Dispositional attributions for negative behaviors. As expected, commitment (β = -.07, CI[-.14, -.02], κ^2 = .07, CI[.02, .14], R^2 = .01), trust (β = -.04, CI[-.11, -.01], κ^2 = .04, CI[.01, .10], R^2 = .01), intimacy (β = -.06, CI[-.16, -.02], κ^2 = .06, CI[.02, .16], R^2 = .01), and love (β = -.08, CI[-.15, -.03], κ^2 = .08, CI[.03, .15], R^2 = .01) as well as IQS (β = -.11, CI[-.21, -.04], κ^2 = .10, CI[.04, .19], R^2 = .02) mediated the effects of *dispositional attribution*s for negative behaviors on promise making.

Self attributions for negative behaviors. As expected, commitment (β = -.07, CI[-.14, -.03], κ^2 = .08, CI[.03, .14], R^2 = .01), intimacy (β = -.08, CI[-.17, -.03], κ^2 =

.08, CI[.03, .16], R^2 = .01), and love (β = -.04, CI[-.10, -.01], κ^2 = .04, CI[.01, .10], R^2 = .01) as well as IQS (β = -.06, CI[-.13, -.01], κ^2 = .06, CI[.01, .12], R^2 = .01) mediated the effects of self attributions for negative behaviors on promise making. Contrary to expectations however, trust did not emerge as a mediator (β = -.00, κ^2 < .01, R^2 < .01; *n.s.*).

Supplementary Hypothesis 3 focuses on promise *keeping* instead of promise making, and states that PRQC index components and IQS are unlikely to mediate the relationship between attributions and *promise keeping*. Results showed that as expected, neither the PRQC index components nor IQS emerged as mediators (-.08 < β < .04, κ^2 < .07, R^2 < .01; *n.s.*).

Discussion

The results of Study 3 provide further evidence to distinguish interpersonal attributions from dispositional, situational, and self attributions. In the case of attributions for positive behaviors, partner suitability judgments were found to mediate the relationship between interpersonal attributions and relationship satisfaction. However, this association was not moderated by growth.

Partner suitability judgments were by and large also found to mediate the relationship between the other attributions and relationship satisfaction. Unlike interpersonal attributions, some these associations were were moderated by growth. For attributions for negative behaviors, growth did moderate the relationship between interpersonal attribution and commitment and love, but did not moderate any of the effects of dispositional attributions on partner suitability judgments. This may suggest that dispositional attributions are more tightly linked to partner suitability judgments then hypothesized. Lastly, the moderated mediation model was found to

work mainly for dispositional attributions for positive behaviors and self attributions for negative behaviors. Implications for this will be considered in the general discussion.

General Discussion and Conclusion

Extending upon the traditional internal-external dichotomy prevalent in relationship attribution research, the present research argues for the importance of interpersonal attributions. When faced with positive or negative behaviors enacted by their partners, intimates may view them as originating from their partner's disposition (i.e., make dispositional attributions), or as arising from external circumstances such as situational factors and/or the self (i.e., make situational and/or self attributions). The present research posits that in addition to these internal/external attributions, intimates may also view these behaviors as caused by the way their partner feels about them and/or their relationship (i.e., make interpersonal attributions). The notion of interpersonal attributions is supported by research showing that when contemplating their interactions with others, people naturally think in relationship specific ways (e.g., Baldwin, 1992).

Three studies sought to substantiate this assertion. Studies 1 (EFA and CFA) and 2 (CFA) showed that interpersonal attributions are empirically distinct in two ways. First, the items for interpersonal attributions load onto their own factors (one for positive behaviors, one for negative behaviors) which can be separated from dispositional, situational, and self attributions. Second, the findings also demonstrated interpersonal attributions' incremental predictive value on relationship satisfaction. Specifically, interpersonal attributions for both positive and negative behaviors were shown to predict relationship satisfaction even after controlling for other attributions for the same behaviors.

Study 3 extended upon these findings by: 1) examining the underlying mechanisms that may explain this association; and 2) whether the effects of

interpersonal attributions on these mechanisms could be qualified by relationship beliefs. Partner suitability judgments in the form of cognitive and affective responses, and perceptions partners' relationship specific qualities were found to mediate the relationship between interpersonal attributions and relationship satisfaction. Most importantly, this mediation chain was not dependent on individuals' growth beliefs.

In contrast, the results for the other attributions were more complex. Dispositional attributions generally positively predicted relationship satisfaction when controlling for other attributions for the same behaviors. In addition, as hypothesized, partner suitability judgments were found to mediate the relationship between dispositional attributions and relationship satisfaction. Unlike interpersonal attributions however, the dispositional-partner suitability mediation chain was moderated by growth beliefs for positive behaviors. More specifically, growth had an *enhancing* effect; the effects of making dispositional attributions for positive behaviors were stronger for those who believed in growth compared to those who did not. In contrast, for negative behaviors, the dispositional-partner suitability mediation chain was not *buffered* by growth. That is, intimates who made dispositional attributions for negative behaviors tended to have more negative cognitive and affective responses and had lower evaluations of their partners' relationship-relevant qualities regardless of their growth beliefs. Taken together, it seems that the benefits of making dispositional attributions for positive behaviors hinges upon growth beliefs, but the detrimental effects of the same attributions for negative behaviors are not mitigated by growth.

Comparing the effects of interpersonal vs. traditional attributions

Interpersonal vs. dispositional attributions. It thus seems that, for positive behaviors, the effects of interpersonal attributions are robust (i.e., not dependent on growth), but the effects of dispositional attributions are qualified by growth. In contrast, for negative behaviors, both interpersonal and dispositional attributions have a similarly robust and detrimental impact. To elaborate, for positive behaviors, making interpersonal attributions may have benefits that are not dependent on growth, whereas the benefits of dispositional attributions may be more pronounced when intimates do believe in growth. In contrast, for negative behaviors, the detrimental impact of making interpersonal and dispositional attributions may be insurmountable in that even a belief that love can be cultivated cannot mitigate their effects.

Interpersonal attributions vs. external attributions. Past research has suggested that making external attributions has an impact of relationship satisfaction (Bradbury & Fincham, 1990). However, in existing research, external attributions have been operationalized on the same continuum as internal attributions, and therefore, it is unclear if the observed effects were indeed driven by making an external attribution or by *not making* an internal attribution. The present research addresses this conundrum by measuring internal and external attributions on separate dimensions. While internal (i.e., dispositional) attributions were shown have predictive power, the two types of external (i.e., situational and self) attributions did not consistently predict relationship satisfaction. In examining potential indirect effects, trust (marginal), intimacy, love, and IQS (but not commitment) were found to mediate the relationship between situational attributions for *positive* behaviors. For negative behaviors, none of the partner suitability judgments emerged as mediators

for situational or self attributions. This effect is puzzling, but it could be explained by the moderating function of growth. Moderation analyses showed that growth moderated the effects of situational and self attributions on a number of partner suitability judgments, mainly buffering against the negative impact of making situational attributions for positive behaviors and making self attributions for negative behaviors. Thus, it seems that external attributions do predict relationship satisfaction under certain conditions.

In the context of the current research, it is important to examine the effects of these external attributions vis-à-vis interpersonal attributions. Matching the robust findings for interpersonal attributions against the inconsistent effects of situational and self attributions, it seems that interpersonal attributions may play a larger role in determining relationship health. An explanation for this can be found in the implications behind making these different attributions. When examining relationship outcomes such as judgments about partner suitability and relationship satisfaction, attributions that center on the relationship, and/or interpersonal factors are likely to have a greater impact. Consistent with this line of reasoning, interpersonal attributions which implicate a partner's *feelings* towards the self or the relationship are likely to have greater predictive power compared to external attributions, which absolve a partner of responsibility for their behaviors. Explained this way, the reason behind the disparate pattern of results between interpersonal attributions, and situational and self attributions becomes clear. As interpersonal attributions implicate the partner's feelings about the self and the relationship, they are likely to directly influence partner suitability judgments regardless of intimates' growth beliefs. In contrast, the influence of situational and self attributions on partner suitability judgments is likely to hinge on intimates' growth beliefs.

Summary. In sum, these results highlight the importance of taking interpersonal attributions into account when examining attributions in romantic relationships. Interpersonal attributions for positive behaviors can be clearly distinguished from dispositional and situational attributions in that unlike the latter two, their effects are independent of growth beliefs. In a similar vein, interpersonal attributions for negative behaviors can be distinguished from situational and self attributions, but their effects may not be clearly distinct from dispositional attributions for negative behaviors.

Theoretical Implications

These patterns of results have two theoretical implications. First, these results highlight the importance of examining internal and external attributions on independent scales. When using bipolar scales such as the one used in the RAM (e.g., "My partner's behavior was due to something about him"), high scores signify that an internal attribution has been made, while low scores signify that an external attribution has been made. This operationalization makes the interpretation of findings difficult because it is not immediately clear if significant effects of a low score on an outcome variable are driven by making external or *not making* internal attributions. Thus, on the surface, it seems that the results of the present research did not replicate the past findings with regard to the impact of external attributions on relationship satisfaction. However, this apparent inconsistency can be explained by the difference in the way attributions are measured. By assessing internal and external attributions on separate scales, the present research suggests that the results of these internal-external measures are in fact driven by internal attributions (i.e., the effects observed in past research were due to whether individuals made internal attributions rather than fluctuations in external attributions). Specifically, making

external (i.e., situational and/or self) attributions for negative behavior did not consistently predict relationship satisfaction or partner suitability judgments, whereas making internal (i.e., dispositional) attributions did.

Second, these results suggest that although interpersonal and dispositional attributions for negative behaviors have unique effects on relationship satisfaction, they are both likely to affect partner suitability judgments in similar ways. Both interpersonal and dispositional attributions may have strong direct links to partner suitability judgments such that their effects are not qualified by growth. One reason for this can be that they are closely linked such that one reflects the other. When making dispositional attributions for negative behavior, an intimate's negative perceptions of their partner's disposition may contaminate their perceptions of their partner's feelings towards them or their relationship. Similarly, viewing one's partner as not loving them or not caring for their relationship is likely to have implications on an intimate's perceptions of their partner's disposition. These perceptions are then likely to have a strong impact on intimate's partner suitability judgments.

Applications

The goal of existing research on attributions and relationship satisfaction was to develop interventions that benefitted the distressed couples. These interventions were focused on helping distressed couples make less partner attributions, and more external attributions for negative relationship events (Bradbury & Fincham, 1990). Following that tradition, the present research also has the ability to inform intervention strategies. Results suggest that intervention strategies should encourage intimates to refrain from making interpersonal attributions when explaining negative partner behaviors, and to make stronger interpersonal attributions for positive partner

behaviors. Mediation results go further to suggest that attributions can be the predictor and outcome of relationship satisfaction. Given this mutually reinforcing nature of the associations between attributions, partner suitability judgments, and satisfaction, such intervention strategies should help the relationship evolve into a happier one.

In addition to targeting attributions, the current research demonstrated the predictive and mediating effects of partner suitability judgments. Although some partner suitability judgments are grounded in emotions and may be difficult to change (Holmes & Boon, 1990), the present research can draw on existing research on trust and IQS to examine how this finding can inform interventions aimed at increasing relationship satisfaction (e.g., focusing on boosting one's self-esteem as per Murray et al., 1998). This is especially so as in the present research, both trust and IQS were shown to be relatively consistent predictors (of satisfaction and attributions) and mediators (of the relationship between satisfaction and attributions).

Limitations and Future Research

Theoretical concerns.

The causal impact of attributions on relationship satisfaction. Given that attributions emerged as both a predictor and an outcome variable in the mediation analyses, the first theoretical concern arising from the present research centers on the causal effects of attributions on relationship satisfaction. In the theoretical model, attributions are conceptualized as a predictor (and partner suitability and relationship satisfaction as outcome variables). This ordering was informed by existing attribution research in romantic relationships (e.g., Fincham & Bradbury, 1992), which considered attributions to be the cause of marital distress.

However, supplemental mediation analyses showed that the alternative model with PRQC/IQS as the predictor, satisfaction as the mediator, and attributions as the outcome (i.e., Alternative Mediation #3) was significant as well. Taken together with the finding that the originally theorized model was also significant, it seems that all three variables (attributions, partner suitability judgments, and relationship satisfaction) may be mutually reinforcing. After all, it seems reasonable that people who make maladaptive attributions rate their relationship quality and satisfaction as lower than those who make adaptive attributions (i.e., the originally theorized mediation model); *and also*, people who have higher relationship quality and are happier in their relationship tend to be more forgiving of negative behaviors and more generous in making attributions for positive behaviors than those who rate their relationship quality and satisfaction lowly (i.e., Alternative Mediation #3). However, with the current pattern of results, it is not clear which comes first: the maladaptive attributional pattern or the poor relationship quality.

The need to establish causal direction opens doors for future research, and there are two potential avenues to do so. First, researchers can conduct a longitudinal study in which attributional patterns, PRQC/IQS *and* satisfaction are measured at multiple time points; and incorporate a longer interval between waves (e.g., one year) to observe changes over time. One limitation of the present research was that the intervals between the waves do not allow sufficient time to pass to establish causation (Study 1: two months; Study 3: two weeks). Furthermore, attributions were only measured at W1. This means that although the attributions-partner suitability judgments-relationship satisfaction mediation chain measured variables across the two weeks, the alternative model with attributions as the outcome variable was run using within W1 variables. This may have inflated the inter-variable relationships. In short,

a longitudinal design as described above would be needed to better establish causal direction.

The second recommendation for establishing direction of causality is to compare the efficacy of two different interventions. The first intervention would be developed based on the originally theorized mediation model, and target the types of attributions that intimates make for their partner's positive and negative behavior. The second intervention would be developed based on Alternative Mediation #3, and target the improvement of perceived PRQC/IQS. Either using a pre-test/post-test design or a control group vs. intervention group design, researchers will be able to examine the relative impact of each intervention on relationship satisfaction. With these experiments, the causal direction can be established.

Potential alternative moderators. Dispositional attributions and partner suitability judgments may implicate people's implicit theories about people more broadly. Thus, the next theoretical concern to be addressed is whether other more general implicit theories (e.g., implicit theories about the changeability of an individual) may *also* moderate the link between attributions and partner suitability judgments. In my studies, data of three additional implicit theories were also collected: destiny beliefs (Knee, 1998; Knee et al., 2003), implicit theories of interpersonal ability (ITIA; Hui, Bond, & Molden, 2012), and implicit person theories (IPT; Levy, Stroessner, & Dweck, 1998). Destiny beliefs refer to the belief that relationship partners are either meant to be or not (Knee, 1998), ITIA refer to beliefs of whether interpersonal abilities are fixed or changeable (Hui et al., 2012), while IPT refer to general beliefs of whether people can change (Levy et al., 1998). Moderation analyses were conducted on each of these implicit theories. Tables 13a – 13c provide an overview of the results. For the most part, the supplemental analyses showed that

none of these beliefs moderated the link between attributions and partner suitability judgments (*ps* > .09). Only one interaction was significant: IPT moderated the link between self attributions and passion (β = -.18, p = .03). These results suggest that the moderating effects of growth on the attributions-partner suitability judgments link are unique.

Alternative explanations for the effects of interpersonal attributions. The last theoretical concern is that interpersonal attributions may be confounded by their meta-cognitive nature. Unlike other attributions, when making interpersonal attributions, intimates are engaging in meta-cognition by making inferences of how their partner feels about them or their relationship. Therefore, it may be the act of perspective taking required to make these interpersonal attributions that is responsible for the incremental value of interpersonal attributions found in the present research. To address this concern, the effects of another variable involving meta-cognition, *intentionality*, were examined. If the incremental effects of interpersonal attributions can be fully explained by meta-cognition, then: (1) interpersonal attributions will no longer predict relationship satisfaction once intentionality is controlled for, and/or (2) replacing interpersonal attributions with intentionality will yield the same results (i.e., intentionality will function in a similar way as interpersonal attributions.

Analyses showed that interpersonal attributions for both positive (β = .47, p < .01) and negative (β = -.18, p = .058) partner behaviors continued to predict satisfaction even after controlling for intentionality. In addition, when interpersonal attributions were replaced by intentionality, the results were non-significant for positive (β = .15, p = .10) and negative (β = -.08, p = .41) partner behaviors. Taken together, these results suggest that meta-cognition is unlikely to account for the incremental effects of interpersonal attributions on relationship satisfaction.

Generalizability across other interpersonal contexts. The present research only examines attributions for a single type of interpersonal relationships – romantic ones. Applying Baldwin's (1992) research on relational schemas however, the same should apply for other kinds of interpersonal relationships such as between employees and supervisors. For example, Eberly and colleagues (Eberly, Holley, Johnson, & Mitchell, 2011; 2017) examine relational attributions in organizational settings, showing that they can be distinguished from self and external attributions. In their research, relational attributions for negative feedback provided by their supervisors were shown to be related to various relational improvement behaviors such as engaging in activities targeted at improving the relationship with a team leader (Eberly et al., 2017). While negative feedback can be considered to be a form of negative behavior, feedback itself also provides the recipient with the opportunity for improvement. Future research can extend on this to examine attributions that employees may make in response to objectively positive and negative behaviors that their supervisors might engage in, in the context of their workplace relationship.

Methodological concerns.

Frequency of negative behaviors in dating relationship. In the Introduction, one of the shortcomings of the RAM was said to be the use of hypothetical scenarios as the base rate of their actual experiences with these behaviors was unclear. In Study 1, participants were asked to recall a positive and negative behavior, but due to concerns of typicality of such behaviors, Studies 2 and 3 addressed this problem by utilizing a frequent partner relationship behavior inventory (Studies 2 & 3; Doss & Christensen, 2006). This approach is theorized to be better in capturing positive and negative behaviors that do actually occur, and are relatively common within relationships. Participants selected the three most frequent behaviors that occur in

their relationship. This ensured that they were making attributions for behaviors that were personally relevant. Despite these considerations, I found that even the three most frequent *negative* behaviors were found to be reported as having occurred far less frequently than the three most *positive* behaviors. A closer look at the descriptive statistics showed that even though the mean for the three most frequent behaviors were 2.47 and 2.07 (i.e., a few times a month) for Study 2 and Study 3 respectively, the mode for both studies were low (i.e., never or rarely).

The reason for such low frequencies of the negative behavior was probably a function of the sample (undergraduate dating couples). Unlike married couples, where one may find it hard to leave even when things are not ideal, dating couples may be more likely to break up when things are not going well. This may account for the high levels of relationship satisfaction across the samples of the present research (*M*s > 5.74). Thus, it seems that in generally satisfied dating relationships, solely studying the attributions negative behaviors may be problematic because these types of behaviors tend to occur infrequently.

Thus, despite the change in methodology, the negative behaviors for which participants made attributions may suffer from the same limitation as the RAM – the lack of actual relevance. The floor effect for the frequency of negative behaviors may also explain why the results for making attributions for negative behaviors did not consistently replicate past research. Given that past research generally utilized samples of married couples who were distressed and non-distressed, negative behaviors may have been more common. Thus, future research may wish to address this limitation by recruiting married couples who may experience higher frequencies of negative behaviors.

Examining the impact of attributions on behaviors. In Study 3, the present research examined relationship behavior (i.e., promise making and promise keeping) as a possible outcome. The results were promising, showing that as expected, interpersonal attributions for both positive and negative behaviors were related to promise making. This provides some initial evidence that interpersonal attributions for partner behaviors have far reaching effects beyond that of relationship satisfaction. Future research can examine the link between attributions and other kinds of relationship behaviors like how intimates deal with conflicts in relationships (e.g., Carver, Scheier, & Weintraub, 1989). Viewing negative behaviors as caused by the way one's partner feels about the self and/or the relationship (as compared to being caused by one's partner's disposition or external circumstances) may be more negatively related to adaptive coping strategies like being planful or engaging in positive reinterpretation, and more positively related to maladaptive ones like behavioral disengagement (Carver et al., 1989).

Conclusion

Overall, the present research provides strong evidence for expanding the conceptionalization of the locus of causality attribution in several ways. First, by assessing dispositional, situational, self, and interpersonal attributions on separate dimensions, the present research was able to isolate their unique effects. Second, past findings on the potentially beneficial effects of making external attributions were clarified by distinguishing between the effects of situational vs. self attributions. Findings from three studies suggested that the driving force behind the association between internal/external attributions on relationship satisfaction is whether the intimate views internal factors (dispositional factors in the present research) as the cause of behaviors; in contrast, neither situational nor self attributions played a

consistent role. Most importantly, the findings demonstrated that interpersonal attributions for both positive and negative partner behaviors are related to relationship variables such as relationship satisfaction and partner suitability judgments. Furthermore, the effects of interpersonal attributions remained robust in predicting relationship satisfaction (via partner suitability judgments), whereas some of the effects for the other attributions were qualified by the belief in growth. This shows that interpersonal attributions can contribute meaningfully to our understanding of attributions in close relationships.

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Appendices

Table 1
Expanded Locus of Causality Attributions and Items

Interpersonal attributions for positive relationship events (P.Interp)
P.Interp 1: To what extent was the behavior a reflection of how your partner felt about you?
P.Interp 2: To what extent was the behavior a reflection of how your partner felt about the relationship?

Dispositional attributions for positive relationship events (P.Char)
P.Char 1: To what extent was the behavior a reflection of your partner's character?
P.Char 2: To what extent does the behavior reflect an enduring aspect of your partner's personality?
P.Char 3: To what extent was the behavior due to something inside of your partner?

Situational attributions for positive relationship events (P.Situation)
P.Situation 1: To what extent was the behavior affected by situational factors that were out of your control?
P.Situation 2: To what extent was the behavior affect by situational factors that were out of your partner's control?
P.Situation 3: To what extent was the behavior affected by circumstances that have nothing to do with the relationship (e.g., job)?
P.Situation 4: To what extent was the behavior affected by someone other than you?

Interpersonal attributions for negative relationship events (N.Interp)
N.Interp 1: To what extent was the behavior a reflection of how your partner felt about you?
N.Interp 2: To what extent was the behavior a reflection of how your partner felt about the relationship?

Dispositional attributions for negative relationship events (N.Char)
N.Char 1: To what extent was the behavior a reflection of your partner's character?
N.Char 2: To what extent does the behavior reflect an enduring aspect of your partner's personality?
N.Char 3: To what extent was the behavior due to something inside of your partner?

Situational attributions for negative relationship events (N.Situaiton)
N.Situation 1: To what extent was the behavior affected by situational factors that were out of your control?
N.Situation 2: To what extent was the behavior affect by situational factors that were out of your partner's control?
N.Situation 3: To what extent was the behavior affected by circumstances that have nothing to do with the relationship (e.g., job)?
N.Situation 4: To what extent was the behavior affected by someone other than you?

Self-Attributions (N.Self)
N.Self 1: To what extent were you responsible for the behavior?
N.Self 2: To what extent was the behavior a reflection of your character?
N.Self 3: To what extent does the behavior reflect an enduring aspect of your personality?
N.Self 4: To what extent was the behavior due to something inside of you?

Note. Interpersonal, dispositional, and situational attributions for positive and negative relationship behaviors only differ with regards to the valence of the target behaviors. Self-attributions only reference negative relationship behaviors.

Table 2

Study 1: Means, Standard Deviations, and Correlations for Attributions and Relationship Satisfaction

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
W1																	
1. Interpersonal attributions (+)	6.23	.90	-														
2. Dispositional attributions (+)	5.75	1.12	.35**	-													
3. Situational attributions (+)	3.00	1.24	-.03	.01	-												
4. Interpersonal attributions (-)	3.53	1.73	-.18*	-.14	.18*	-											
5. Dispositional attributions (-)	4.56	1.48	-.07	.02	-.01	.30**	-										
6. Situational attributions (-)	4.31	1.34	.09	.10	.23**	-.00	-.01	-									
7. Self attributions (-)	3.56	1.59	.04	.13	.17*	.32**	.18*	-.05	-								
8. Relationship Satisfaction	5.94	1.02	.36**	.42**	-.03	-.33**	-.25**	.07	.05	-							
W2																	
9. Interpersonal attributions (+)	6.12	.843	.34**	.17*	.07	-.15	-.10	-.06	.09	.30**	-						
10. Dispositional attributions (+)	5.85	.949	.33**	.45**	.04	-.16*	-.17*	-.03	.07	.35**	.54**	-					
11. Situational attributions (+)	3.08	1.24	-.09	.06	.18*	.24**	.21**	-.00	.19*	-.11	-.22**	-.15	-				
12. Interpersonal attributions (-)	3.48	1.55	-.26**	-.13	.05	.27**	.33**	-.05	.09	-.26**	-.23**	-.28**	.28**	-			
13. Dispositional attributions (-)	4.55	1.45	-.11	-.04	.06	.20*	.46**	-.01	-.05	-.11	-.09	-.27**	.25**	.59**	-		
14. Situational attributions (-)	4.07	1.24	-.06	.02	.03	.08	-.25**	.19*	.04	-.04	-.11	.05	.17*	-.07	-.17*	-	
15. Self attributions (-)	3.33	1.48	-.03	.07	.26**	.13	.14	-.05	.29**	-.06	-.02	-.11	.24**	.42**	.26**	.02	-
16. Relationship Satisfaction	5.85	.93	.38**	.28**	.09	-.29**	-.30**	.03	-.04	.68**	.37**	.41**	-.17*	-.37**	-.27**	-.05	-.09

Note. $*p < .05$, $**p < .01$

Table 3

Study 1 Attributions Factor Structure EFA Factor Loadings using Direct Oblimin Rotation

Item	P.Interp	P.Disp	P.Ext	N.Interp	N.Disp	N.Ext	N.Self	Communalities
1. P.Interp 1	**.85**	.01	.04	-.01	.00	-.02	.00	.73
2. P.Interp 2	**.78**	.04	-.02	.04	-.01	-.01	.01	.61
3. P.Disp 1	-.07	**.87**	-.02	-.05	.06	.02	.01	.74
4. P.Disp 2	.03	**.85**	.01	.04	-.10	.00	.04	.75
5. P.Disp 3	.08	**.77**	.02	.01	.03	.01	-.02	.64
6. P.Ext 1	-.01	.06	**.72**	.02	.03	-.10	-.13	.48
7. P.Ext 2	.09	-.05	**.85**	-.13	.01	.06	.03	.74
8. P.Ext 3	-.01	-.02	**.42**	.06	-.04	.21	.08	.30
9. P.Ext 4	-.12	-.02	**.30**	.17	-.03	-.01	.15	.21
10. N.Interp 1	-.01	-.06	-.01	**.80**	.02	.01	.10	.72
11. N.Interp 2	-.01	-.01	.03	**.89**	.09	.01	-.05	.83
12. N.Disp 1	-.02	.04	-.02	-.04	**.89**	.06	.06	.80
13. N.Disp 2	-.07	.04	.04	.11	**.81**	-.13	.00	.73
14. N.Disp 3	.06	-.07	.00	.03	**.84**	.06	.08	.74
15. N.Ext 1	-.08	.03	-.01	-.01	-.07	**.81**	-.17	.69
16. N.Ext 2	.06	.03	.05	.02	-.16	**.50**	.27	.38
17. N.Ext 3	.02	.02	.08	-.20	.05	**.44**	-.02	.26
18. N.Ext 4	.01	.02	-.02	.19	.12	**.50**	-.08	.30
19 N.Self 1	-.03	.03	.03	.11	-.13	-.12	**.67**	.53
20. N.Self 2	-.03	.02	-.12	-.01	.04	.01	**.93**	.84
22. N.Self 3	-.03	.00	.01	-.06	.21	-.01	**.82**	.71
22. N.Self 4	.12	.05	.08	.06	.07	-.02	**.79**	.72
Eigenvalue	1.24	2.48	1.45	2.27	3.23	1.32	3.85	
% of variance explained	5.61	11.28	6.60	10.30	14.70	6.01	17.74	

Note. Factor loadings > |.30| are bolded. Refer to Table 1 for complete items.

Table 4

Study 1 and 2 CFA Goodness-of-Fit Indicators and Standardized Factor Loadings

	Study 1 W2			Study 2		
	Proposed factor structure	**Alt Model #1**	**Alt Model #2**	**Proposed factor structure**	**Alt Model #1**	**Alt Model #2**
X^2	254.44**	443.65**	606.14**	320.46**	635.10**	1113.53**
ΔX^2		189.21**	351.70**		314.64**	793.07**
df	188	199	203	188	199	203
RMSEA	.055	.103	.130	.077	.136	.193
CFI	.952	.822	.707	.939	.800	.581
P.Disp						
P.Disp 1	.94			.94		
P.Disp 2	.91			.89		
P.Disp 3	.90			.86		
P.Interp						
P.Interp 1	.97			.95		
P.Interp 2	.91			.98		
P.Ext						
P.Ext 1	.58			.92		
P.Ext 2	.40			.91		
P.Ext 3	.67			.84		
P.Ext 4	.52			.77		
N.Char						
N.Disp 1	.83			.95		
N.Disp 2	.82			.76		
N.Disp 3	.84			.87		
N.Interp						
N.Interp 1	.85			.93		
N.Interp 2	.86			.97		
N.Ext						
N.Ext 1	.66			.89		
N.Ext 2	.84			.94		
N.Ext 3	.48			.75		
N.Ext 4	.55			.88		
N.Self						
N.Self 1	.72			.89		
N.Self 2	.91			.68		
N.Self 3	.84			.75		
N.Self 4	.88			.73		

Note. Refer to Table 1 for the complete items.

Table 5a

Study 1: Direct and Incremental Effects of Same- and Cross-wave Attributions on Satisfaction

	W1 Attributions → W1 Satisfaction		W2 Attributions → W2 Satisfaction		W1 Attributions → W2 Satisfaction	
	Direct	Increm	Direct	Increm	Direct	Increm
Attributions for Positive Behavior						
Interpersonal (+)	.36**	.24**	.37**	.20*	.38**	.32**
Dispositional (+)	.42**	.32**	.41**	.30**	.28**	.16*
External (+)	-.03	-.03	-.17*	-.08	.09	.10
Attributions for Negative Behavior						
Interpersonal (-)	-.33**	-.33**	-.37**	-.35**	-.29**	-.24**
Dispositional (-)	-.25**	-.19*	-.27**	-.10	-.30**	-.24**
External (-)	.07	.08	-.05	-.09	.03	.03
Self (-)	.05	.19*	-.09	.08	-.04	.09

Note. Standardized $\boldsymbol{\beta}$ of direct and incremental effects of attributions on satisfaction. ^$p < .10$, *$p < .05$, **$p < .01$.

Table 5b

Studies 2 & 3 Direct and Incremental Effects of Same- and Cross-wave Attributions on Satisfaction

	Study 2		Study 3			
	Cross-sectional		Attributions → W1 Satisfaction		Attributions → W1 Satisfaction	
	Direct	Increm	Direct	Increm	Direct	Increm
Attributions for Positive Behavior						
Interpersonal (+)	.48**	.37**	.60**	.60**	.41**	.34**
Dispositional (+)	.42**	.19^	.33**	-.00	.26**	.07
External (+)	-.11	.02	-.15^	.00	-.20*	-.11
Attributions for Negative Behavior						
Interpersonal (-)	-.19*	-.33*	-.25**	-.01	-.18*	-.01
Dispositional (-)	-.06	.09	-.37**	-.35**	-.27**	-.21^
External (-)	.00	.01	.04	.10	-.07	-.01
Self (-)	.02	.16	-.20*	-.04	-.22**	-.11

Note. Standardized $\boldsymbol{\beta}$ of direct and incremental effects of attributions on satisfaction. ^$p < .10$, *$p < .05$, **$p < .01$.

Table 6

Study 2: Means, Standard Deviations, and Correlations for Attributions and Relationship Satisfaction

Variable	Mean	SD	1	2	3	4	5	6	7
1. Interpersonal attributions (+)	5.84	.83	-						
2. Dispositional attributions (+)	5.74	.73	.78**	-					
3. Situational attributions (+)	3.19	1.18	-.26**	-.26**	-				
4. Interpersonal attributions (-)	3.53	1.28	-.09	-.05	.11	-			
5. Dispositional attributions (-)	4.27	1.03	-.03	.00	.12	.70**	-		
6. Situational attributions (-)	3.93	1.00	.06	.05	.21*	.15	.34**	-	
7. Self attributions (-)	3.32	1.03	.01	.05	.14	.53**	.42**	.05	-
8. Relationship Satisfaction	5.74	1.06	.51**	.47**	-.11	-.22*	-.06	.00	.02

Note. $*p < .05$, $**p < .01$

Table 7

Study 3: Means, Standard Deviations, and Correlations

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Interpersonal attributions (+)	6.17	.77	-																
2. Dispositional attributions (+)	5.80	.83	.56**	-															
3. Situational attributions (+)	2.77	1.14	-.26**	-.07	-														
4. Interpersonal attributions (-)	3.12	1.51	-.12	.00	.11	-													
5. Dispositional attributions (-)	3.62	1.28	-.21*	-.06	.13	.60**	-												
6. Situational attributions (-)	3.63	1.07	-.02	.16	.16	-.04	.14	-											
7. Self attributions (-)	2.96	1.06	-.09	.10	.30**	.47**	.52**	.30**	-										
8. W1 Growth	5.61	.66	.16	.18*	.01	.02	-.08	.22**	-.03	-									
9. W1 Destiny	3.48	.95	.09	.19*	.09	.12	.11	-.07	.08	-.18*	-								
10. W2 PRQC Commitment	6.22	.96	.31**	.18*	-.12	-.12	-.19*	-.01	-.10	.25**	-.09	-							
11. W2 PRQC Trust	6.21	.89	.38**	.17*	-.16	-.20*	-.19*	.05	-.07	.23**	-.03	.59**	-						
12. W2 PRQC Intimacy	5.92	.89	.42**	.29**	-.19*	-.13	-.12	.00	-.13	.21*	.05	.62**	.58**	-					
13. W2 PRQC Love	6.31	.79	.40**	.20*	-.18*	-.21*	-.21*	.02	-.12	.21*	-.07	.82**	.77**	.65**	-				
14. W2 PRQC Passion	4.93	1.32	.25**	.29**	-0.1	-.08	.00	-.01	-.08	.13	.12	.30**	.25**	.59**	.30**	-			
15. W2 IQS	5.42	.75	.45**	.29**	-.19*	-.14	-.31**	.05	-.15	.25**	-.03	.46**	.57**	.52**	.54**	.18*	-		
16. W2 RS Satisfaction	5.98	1.02	.41**	.26**	-.20*	-.18*	-.27**	-.07	-.22**	.16	.05	.73**	.47**	.65**	.60**	.34**	.53**	-	
17. Promise Making	9.04	4.56	.19*	.05	-.14	-.07	-.12	.02	-.09	.07	.01	.28**	.28**	.24**	.30**	.16	.18*	.19*	-
18. Promise Keeping	2.19	4.09	.00	-.03	.01	.09	.12	-.11	.03	-.07	.09	-.02	-.04	-.01	.02	.05	-.14	-.12	.54**

Note. *$p < .05$, **$p < .01$

Table 8

Study 3 W2 PRQC and IQS as mediators between Attributions and W2 Relationship Satisfaction

	Commitment		Trust		Intimacy		Love		Passion		IQS	
	β	CI	*β*	CI	*β*	CI	*β*	CI	*β*	CI	*β*	CI
Attributions for Positive Behavior												
Interpersonal (+)	**.27**	[.15, .41]	**.18**	[.10, .32]	**.32**	[.19, .47]	**.28**	[.19, .42]	**.08**	[.03, .18]	**.26**	[.16, .42]
Dispositional (+)	**.15**	[.00, .30]	**.09**	[.02, .19]	**.22**	[.08, .36]	**.14**	[.01, .27]	**.10**	[.04, .21]	**.18**	[.09, .31]
Situational (+)	-.08	[-.23, .03]	**-.06**	[-.15, -.00]	**-.11**	[-.24, -.01]	**-.09**	[-.21, -.01]	-.03	[-.10, .01]	**-.09**	[-.18, -.00]
Attributions for Negative Behavior												
Interpersonal (-)	-.06	[-.13, .01]	**-.06**	[-.11, -.02]	-.06	[-.12, .01]	**-.08**	[-.14, -.04]	-.00	[-.05, .05]	-.05	[-.12, .01]
Dispositional (-)	**-.11**	[-.19, -.03]	**-.07**	[-.14, -.02]	-.06	[-.13, .01]	**-.10**	[-.15, -.03]	-.00	[-.05, .06]	**-.12**	[-.21, -.06]
Situational (-)	-.00	[-.12, .09]	.02	[-.05, .10]	.00	[-.10, .08]	.01	[-.08, .09]	-.00	[-.06, .05]	.03	[-.05, .12]
Self (-)	-.07	[-.16, .03]	-.03	[-.11, .04]	-.08	[-.17, .01]	-.07	[-.15, .00]	-.03	[-.08, .02]	-.07	[-.15, .01]

*Note. S*tandardized ***β*** and CI of indirect effects of attributions on W2 Relationship Satisfaction mediated by W2 PRQC and IQS. Significant effects are in bold.

Table 9a

Study 3 Alternative mediation chain #1: W1 PRQC/IQS → Attributions → W2 Relationship Satisfaction

	Commitment		Trust		Intimacy		Love		Passion		IQS	
	β	CI	*β*	CI	*β*	CI	*β*	CI	*β*	CI	*β*	CI
Attributions for Positive Behavior												
Interpersonal (+)	**.11**	[.04, .22]	**.14**	[.06, .26]	.11	[-.02, .28]	**.16**	[.05, .37]	**.07**	[.03, .12]	**.16**	[.03, .31]
Character (+)	.03	[-.00, .10]	.05	[-.00, .13]	.04	[-.03, .14]	.05	[-.00, .17]	.04	[-.00, .10]	.06	[-.01, .16]
Situational (+)	.02	[-.00, .08]	.02	[-.00, .10]	.02	[-.04, .11]	.03	[-.01, .13]	.02	[-.00, .06]	.03	[-.01, .12]
Attributions for Negative Behavior												
Interpersonal (-)	.02	[-.00, .07]	.02	[-.00, .08]	.02	[-.02, .08]	.03	[-.02, .10]	.02	[-.00, .05]	.03	[-.02, .11]
Character (-)	.04	[-.00, .11]	.04	[-.00, .10]	**.05**	[.01, .13]	.07	[-.00, .16]	.02	[-.01, .06]	.06	[-.02, .19]
Situational (-)	.00	[-.01, .03]	-.02	[-.07, .00]	-.01	[-.06, .01]	-.00	[-.05, .02]	-.00	[-.03, .01]	-.01	[-.07, .01]
Self (-)	.03	[-.00, .09]	.00	[-.03, .05]	.03	[-.02, .09]	.04	[-.00, .11]	.02	[-.00, .06]	.04	[-.00, .11]

*Note. S*tandardized ***β*** and CI of indirect effects of W1 PRQC/IQS on W2 Relationship Satisfaction mediated by attributions. Significant effects are in bold.

Table 9b

Study 3 Alternative mediation chain #2: W1 Relationship Satisfaction → Attributions → W2 PRQC/IQS

	Commitment		Trust		Intimacy		Love		Passion		IQS	
	β	CI	*β*	CI	*β*	CI	*β*	CI	*β*	CI	*β*	CI
Attributions for Positive Behavior												
Interpersonal (+)	-.05	[-.18, .06]	.05	[-.06, .16]	.05	[-.05, .17]	.04	[-.07, .14]	.08	[-.08, .24]	.05	[-.02, .14]
Character (+)	-.01	[-.07, .06]	-.00	[-.04, .05]	.03	[-.02, .10]	.00	[-.04, .05]	**.10**	[.02, .20]	.03	[-.01, .07]
Situational (+)	.00	[-.01, .05]	.01	[-.01, .05]	.01	[-.00, .07]	.01	[-.00, .05]	.02	[-.01, .08]	.01	[-.00, .04]
Attributions for Negative Behavior												
Interpersonal (-)	-.01	[-.05, .02]	.02	[-.01, .06]	-.00	[-.04, .02]	.01	[-.00, .04]	.00	[-.06, .05]	-.00	[-.03, .02]
Character (-)	-.01	[-.06, .04]	.00	[-.05, .06]	-.04	[-.09, .00]	-.00	[-.04, .05]	-.06	[-.19, .02]	.03	[-.02, .09]
Situational (-)	-.00	[-.03, .01]	.00	[-.00, .02]	-.00	[-.02, .01]	-.00	[-.01, .01]	-.00	[-.04, .01]	.00	[-.01, .02]
Self (-)	-.00	[-.04, .02]	-.01	[-.05, .01]	.00	[-.03, .03]	.00	[-.02, .02]	.01	[-.05, .06]	.00	[-.02, .04]

*Note. S*tandardized ***β*** and CI of indirect effects of W1 Relationship Satisfaction on W2 PRAC/IQS mediated by attributions. Significant effects are in bold.

Table 9c

Study 3 Alternative mediation chain #3: W1 PRQC/IQS → W1 Relationship Satisfaction → Attributions

	Commitment		Trust		Intimacy		Love		Passion		IQS	
	β	CI	*β*	CI	*β*	CI	*β*	CI	*β*	CI	*β*	CI
Attributions for Positive Behavior												
Interpersonal (+)	**.35**	[.24, .53]	**.28**	[.18, .43]	**.27**	[.12, .44]	**.39**	[.26, .58]	**.12**	[.06, .19]	**.37**	[.24, .50]
Character (+)	**.25**	[.15, .41]	**.18**	[.08, .32]	.13	[-.01, .29]	**.27**	[.14, .40]	**.06**	[.02, .11]	.21	[.04, .38]
Situational (+)	-.11	[-.30, .05]	-.10	[-.29, .05]	.10	[-.12, .33]	-.05	[-.25, .16]	-.04	[-.11, .01]	-.00	[-.20, .23]
Attributions for Negative Behavior												
Interpersonal (-)	**-.33**	[-.62, -.05]	**-.28**	[-.53, -.07]	-.24	[-.56, .16]	-.23	[-.58, .11]	**-.09**	[-.21, -.02]	-.23	[-.63, .09]
Character (-)	**-.34**	[-.56, -.18]	**-.36**	[-.56, -.20]	**-.49**	[-.77, -.27]	**-.33**	[-.59, -.13]	**-.13**	[-.22, -.07]	-.21	[-.41, .01]
Situational (-)	.08	[-.06, .26]	-.06	[-.21, .08]	-.00	[-.23, .24]	.03	[-.15, .24]	.01	[-.04, .06]	-.03	[-.23, .21]
Self (-)	-.07	[-.25, .11]	**-.22**	[-.39, -.08]	-.01	[-.26, .27]	-.16	[-.41, .03]	-.05	[-.12, .00]	-.10	[-.32, .11]

*Note. S*tandardized ***β*** and CI of indirect effects of W1 PRQC/IQS on attributions mediated by W1 Relationship Satisfaction. Significant effects are in bold.

Table 10a

Study 3 W1 PRQC and IQS as mediators between Attributions and Promise Making

	Commitment		Trust		Intimacy		Love		Passion		IQS	
Attributions	*β*	CI	*β*	CI	*β*	CI	*β*	CI	*β*	CI	*β*	CI
Attributions for Positive Behavior												
Interpersonal (+)	**.10**	[.05, .18]	**.10**	[.03, .20]	**.17**	[.06, .30]	**.09**	[.03, .18]	.02	[-.03, .07]	**.11**	[.03, .21]
Dispositional (+)	.04	[-.00, .10]	**.06**	[.02, .15]	**.11**	[.05, .20]	**.05**	[.01, .11]	.03	[-.02, .11]	**.08**	[.03, .15]
Situational (+)	-.04	[-.11, .01]	-.03	[-.10, .01]	**-.08**	[-.17, -.03]	**-.05**	[-.11, -.01]	-.01	[-.06, .01]	**-.06**	[-.13, -.02]
Attributions for Negative Behavior												
Interpersonal (-)	-.04	[-.10, .01]	-.03	[-.10, .00]	**-.07**	[-.15, -.02]	**-.06**	[-.12, -.02]	-.01	[-.06, .01]	**-.07**	[-.14, -.02]
Dispositional (-)	**-.07**	[-.14, -.02]	**-.04**	[-.11, -.01]	**-.06**	[-.16, -.02]	**-.08**	[-.15, -.03]	-.01	[-.06, .01]	**-.11**	[-.21, -.04]
Situational (-)	-.01	[-.07, .03]	**.04**	[.01, .10]	.02	[-.03, .08]	.01	[-.03, .06]	.01	[-.01, .05]	.02	[-.02, .09]
Self (-)	**-.07**	[-.14, -.03]	-.00	[-.05, .05]	**-.08**	[-.17, -.03]	**-.04**	[-.10, -.01]	-.01	[-.07, .01]	**-.06**	[-.13, -.01]

*Note. S*tandardized ***β*** and CI of indirect effects of attributions on W2 Relationship Satisfaction mediated by W2 PRQC and IQS. Significant effects are in bold.

Table 10b

Study 3 W2 PRQC and IQS as mediators between Attributions and Promise Keeping

	Commitment		Trust		Intimacy		Love		Passion		IQS	
	β	CI	*β*	CI	*β*	CI	*β*	CI	*β*	CI	*β*	CI
Attributions for Positive Behavior												
Interpersonal (+)	-.01	[-.07, .04]	-.02	[-.11, .04]	-.00	[-.10, .07]	.01	[-.06, .07]	.01	[-.04, .07]	-.08	[-.17, .01]
Dispositional (+)	-.00	[-.05, .02]	-.01	[-.06, .02]	.00	[-.07, .05]	.00	[-.03, .05]	.02	[-.04, .08]	-.04	[-.12, .01]
Situational (+)	.00	[-.01, .03]	.01	[-.02, .04]	.00	[-.04, .03]	-.01	[-.04, .02]	-.01	[-.05, .01]	-.03	[-.00, .08]
Attributions for Negative Behavior												
Interpersonal (-)	.00	[-.02, .03]	.00	[-.03, .04]	-.00	[-.03, .03]	-.01	[-.05, .02]	-.00	[-.04, .01]	.02	[-.00, .07]
Dispositional (-)	.00	[-.03, .03]	.00	[-.02, .05]	-.00	[-.02, .02]	-.01	[-.04, .02]	-.00	[-.02, .01]	.04	[-.02, .11]
Situational (-)	.00	[-.01, .02]	-.00	[-.04, .01]	.00	[-.02, .01]	.00	[-.01, .02]	-.00	[-.02, .01]	-.01	[-.07, .01]
Self (-)	.00	[-.01, .03]	.00	[-.01, .03]	.00	[-.02, .02]	-.00	[-.03, .02]	-.00	[-.04, .01]	.02	[-.00, .08]

*Note. S*tandardized ***β*** and CI of indirect effects of attributions on W2 Relationship Satisfaction mediated by W2 PRQC and IQS. Significant effects are in bold.

Table 11

Study 3 W1 Growth Moderating Association between Attributions and Mediators

	Commitment	Trust	Intimacy	Love	Passion	IQS
Attributions for Positive Behavior						
Interpersonal (+)	.07	-.01	.12	.04	.04	.14
Dispositional (+)	**.28****	**.20***	**.25****	**.24****	.05	**.26****
Situational (+)	**.16***	**.19***	**.25****	**.18***	.08	.13
Attributions for Negative Behavior						
Interpersonal (-)	.16^	.13	.13	**.17***	.00	.13
Dispositional (-)	-.02	-.04	-.06	-.07	-.03	.09
Situational (-)	.11	.15^	.08	.22**	-.00	.16^
Self (-)	.15^	.16^	**.20***	**.19***	.02	**.24****

Note. Significant effects are in bold.

Table 12

Study 3 Moderated Mediation: Effects of Attributions on W2 Relationship Satisfaction using PROCESS Macro

Moderator variable: W1	W2 Commitment		W2 Trust		W2 Intimacy		W2 Love		W2 Passion		W2 IQS	
Growth	*B*	*CI*	*B*	*CI*	*B*	*CI*	*B*	*CI*	*B*	*CI*	*B*	*CI*
Interpersonal (+)												
Low Growth (-1 s.d.)	.19	[.03, .37]	.17	[.08, .31]	.23	[.10, .40]	.24	[.10, .40]	.07	[.01, .17]	.19	[.08, .35]
High Growth (+1 s.d.)	.30	[.13, .51]	.17	[.06, .34]	.41	[.23, .67]	.29	[.18, .42]	.10	[.01, .24]	.34	[.17, .38]
Moderated mediation coeff	.08	[-.11, .28]	-.01	[-.11, .14]	.14	[-.04, .36]	.04	[-.08, .19]	.02	[-.06, .12]	.11	[-.01, .29]
Dispositional (+)												
Low Growth (-1 s.d.)	-.08	[-.35, .14]	-.02	[-.18, .10]	.04	[-.25, .23]	-.03	[-.25, .15]	.08	[.00, .17]	.05	[-.08, .18]
High Growth (+1 s.d.)	.37	[.20, .58]	.19	[.06, .40]	.41	[.17, .69]	.30	[.16, .49]	.12	[.02, .34]	.35	[.20, .54]
Moderated mediation coeff	**.34**	[.13, .61]	**.16**	[.02, .41]	**.28**	[.02, .64]	**.25**	[.06, .50]	.03	[-.05, .20]	**.23**	[.07, .40]
Situational (+)												
Low Growth (-1 s.d.)	-.18	[-.39, .02]	-.14	[-.28, -.03]	-.25	[-.42, -.07]	-.18	[-.36, -.03]	-.06	[.14, .02]	-.12	[-.24, -.02]
High Growth (+1 s.d.)	.01	[-.13, .12]	-.00	[-.09, .09]	.01	[-.11, .13]	-.02	[-.12, .10]	-.01	[-.09, .05]	-.01	[-.13, .09]
Moderated mediation coeff	.14	[-.06, .31]	**.10**	[.00, .25]	**.19**	[.02, .36]	.13	[-.04, .30]	.03	[-.05, .12]	.08	[-.02, .21]
Interpersonal (-)												
Low Growth (-1 s.d.)	-.16	[-.32, -.04]	-.12	[-.24, -.04]	-.13	[-.30, -.02]	-.17	[-.32, -.07]	-.02	[-.12, .03]	-.11	[-.23, -.01]
High Growth (+1 s.d.)	-.01	[-.09, .09]	-.03	[-.08, .02]	-.01	[-.10, .09]	-.04	[-.09, .02]	-.02	[-.07, .03]	-.01	[-.08, .06]
Moderated mediation coeff	.12	[-.00, .26]	.06	[-.01, .18]	.09	[-.03, .25]	.10	[-.01, .23]	.00	[-.06, .09]	.07	[-.02, .18]
Dispositional (-)												
Low Growth (-1 s.d.)	-.08	[-.21, .04]	-.04	[-.13, .06]	-.01	[-.14, .14]	-.05	[-.16, .07]	.01	[-.05, .09]	-.13	[-.25, -.01]
High Growth (+1 s.d.)	-.10	[-.23, .01]	-.07	[-.18, .00]	-.08	[-.21, .02]	-.12	[-.24, -.03]	-.01	[-.08, .06]	-.06	[-.18, .03]
Moderated mediation coeff	-.02	[-.16, .11]	-.02	[-.14, .07]	-.05	[-.21, .09]	-.05	[-.20, .07]	-.01	[-.11, .06]	.06	[-.08, .17]
Situational (-)												
Low Growth (-1 s.d.)	-.12	[-.32, .03]	-.06	[-.19, 05]	-.06	[-.25, .07]	-.13	[-.30, -.02]	-.01	[-.10, .05]	-.08	[-.21, .04]
High Growth (+1 s.d.)	.03	[-.11, .17]	.07	[-.02, .18]	.01	[-.14, .13]	.11	[-.00, .23]	-.02	[-.10, .05]	.06	[-.06, .19]
Moderated mediation coeff	.11	[-.04, .28]	.10	[-.02, .22]	.06	[-.09, 24]	**.19**	[.07, .34]	-.01	[-.08, .08]	.11	[-.03, .24]
Self (-)												
Low Growth (-1 s.d.)	-.17	[-.34, .00]	-.11	[-.25, .01]	-.22	[-.39, -.09]	-.18	[-.34, -.08]	-.04	[-.16, .04]	-.18	[-.33, -.04]
High Growth (+1 s.d.)	.03	[-.09, .17]	.04	[-.03, .14]	.05	[-.06, .17]	.04	[-.05, .16]	-.01	[-.08, .08]	.07	[-.04, .20]
Moderated mediation coeff	**.15**	[.01, .35]	**.12**	[.00, .26]	**.20**	[.06, .38]	**.17**	[.05, .34]	.02	[-.06, .15]	**.19**	[.05, .37]

Note. Unstandardized *B*s are reported. Coeffs. in bold signify significant moderated mediation.

Table 13a

Study 3 W1 Destiny Moderating Association between Attributions and PRQC/IQS

	Commitment	Trust	Intimacy	Love	Passion	IQS
Attributions for Positive Behavior						
Interpersonal (+)	.08	.08	-.06	.11	-.01	-.03
Dispositional (+)	-.04	-.03	-.08	.03	.07	.01
Situational (+)	.00	.00	-0.08	-0.04	-0.09	0.05
Attributions for Negative Behavior						
Interpersonal (-)	-.01	-.04	.00	.01	.05	.03
Dispositional (-)	.01	-.05	.08	.02	.09	.07
Situational (-)	.03	-.04	-.01	-.07	.06	.07
Self (-)	-.02	-.12	-.05	-.09	.01	.01

Note. Significant effects are in bold.

Table 13b

Study 3 W1 ITIA Moderating Association between Attributions and PRQC/IQS

	Commitment	Trust	Intimacy	Love	Passion	IQS
Attributions for Positive Behavior						
Interpersonal (+)	-.07	-.06	-.13	-.03	.01	.02
Dispositional (+)	-.11	-.09	-.09	-.09	.05	.00
Situational (+)	.02	-.01	-.03	-.01	-.01	-.01
Attributions for Negative Behavior						
Interpersonal (-)	-.07	-.05	-.04	-.04	.04	-.07
Dispositional (-)	-.03	-.08	.07	-.05	.09	-.02
Situational (-)	.12	.13	.01	.12	.09	.05
Self (-)	-.01	.00	.01	-.01	.04	.04

Note. Significant effects are in bold.

Table 13c

Study 3 W1 IPT Moderating Association between Attributions and PRQC/IQS

	Commitment	Trust	Intimacy	Love	Passion	IQS
Attributions for Positive Behavior						
Interpersonal (+)	-.03	-.05	.08	-.08	.00	.08
Dispositional (+)	.11	.06	.13	.09	-.02	.07
Situational (+)	.14	.11	.04	.10	-.13	.01
Attributions for Negative Behavior						
Interpersonal (-)	.12	.09	.12	.14	-.07	.11
Dispositional (-)	.04	.10	.00	.07	-.13	-.01
Situational (-)	-.03	.00	.00	-.05	-.09	-.05
Self (-)	.08	.13	.05	.10	**-.18**	.11

Note. Significant effects are in bold.

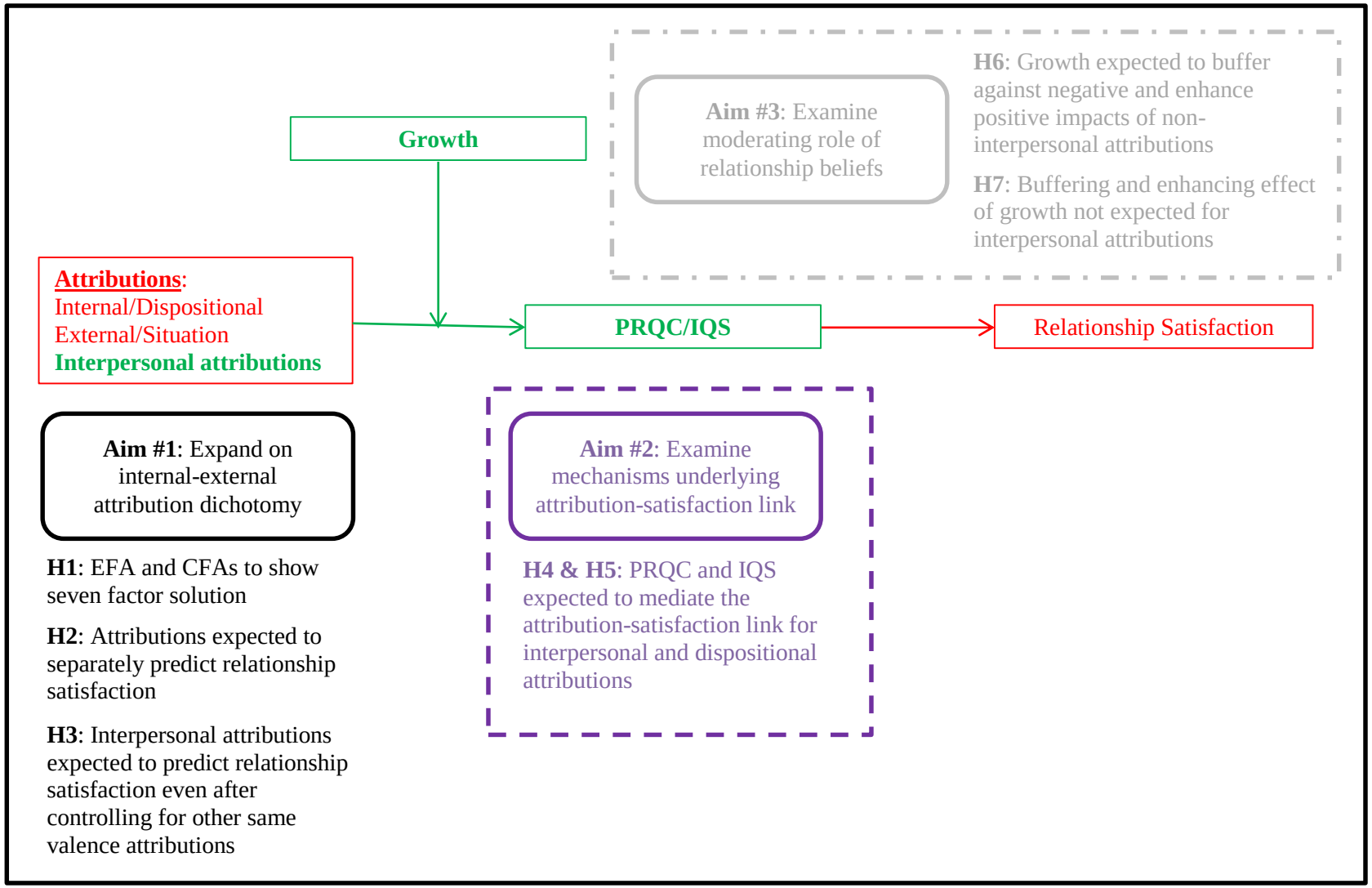

Figure 1. Overall pictorial of the present research's aims and hypotheses.

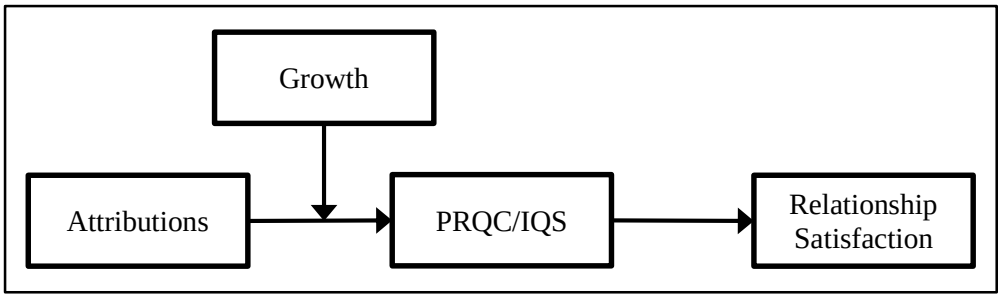

Figure 2. The general moderated mediation model for all attributions except interpersonal attributions.

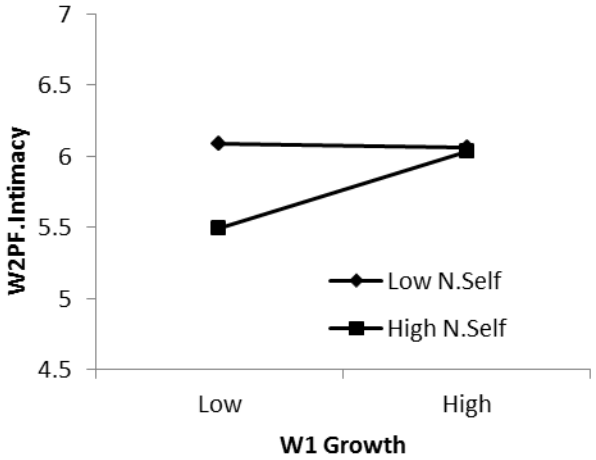

Figure 3. Example of the buffering effect of Growth

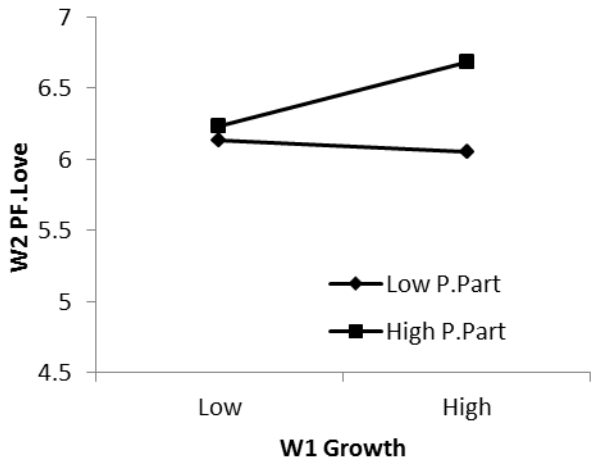

Figure 4. Example of the enhancing effect of Growth