WHEN TEMPTATIONS AREN'T TEMPTING: THE AUTONOMY AND DEROGATION OF ALTERNATIVES MODEL

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A Dissertation

Presented to

The Faculty of the Department

of Psychology

University of Houston

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In Partial Fulfillment

Of the Requirements for the Degree of

Doctor of Philosophy

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By

Benjamin W. Hadden

May, 2016

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ABSTRACT

The perception of attractive alternative partners is a major threat to people's commitment to their romantic relationships. In response, people derogate the attractiveness of such alternatives in an attempt to maintain commitment, which researchers refer to as derogation of alternatives. Relationships researchers have amassed a considerable body of work on this phenomenon which finds that derogation occurs as a function of commitment, such that higher commitment is associated with more derogation. This dissertation sought to integrate self-determination theory with the derogation literature by both proposing and testing the Autonomy and Derogation of Alternatives Model (ADAM). In sum, this research tested whether people high in relationship autonomy are not as threatened by attractive alternatives, and thus do not exhibit the same pattern of derogation as people low in relationship autonomy. Additionally, the research tested the potential moderating role of relationship autonomy regarding the effects of defensive mechanisms on commitment. In three studies, people were asked to judge the attractiveness of people in photographs. Study 1 employed a cross-sectional design that examined the possible moderating role of relationship autonomy in college students. Study 2 employed an experimental design that manipulated relationship autonomy in order to test the causal role of motivation. Finally, Study 3 used a cross-sectional design to test the generalizability of these effects in a non-college student sample. Results largely did not support the ADAM, finding limited evidence that relationship autonomy moderated the association between commitment and ratings. Of notable exception is Study 2, in which experimentally manipulated relationship autonomy marginally moderated the interaction between commitment and threat condition. Further, relationship autonomy was unexpectedly found to predict lower perceptions of attractiveness, suggesting that relationship autonomy may itself increase derogation of alternatives

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When Temptations Aren't Tempting: The Autonomy and Derogation of Alternatives Model

How do people maintain commitment to romantic relationships when tempted by attractive alternatives? To help maintain commitment and buffer against such a temptation, people utilize a cognitive mechanism—known as derogation of alternative partners—that devalues the attractiveness of such attractive alternatives, thereby diminishing the threat and maintaining one's commitment to the relationship. Derogation of alternative partners is a form of preemptive covert relationship maintenance that functions to maintain commitment to one's relationship in the face of doubt or temptation, avoiding problems before they arise. To date, researchers have largely considered preemptive covert mechanisms such as derogation of alternatives to be universally necessary and beneficial for romantic relationships. Recent research examining relationship processes through the lens of self-determination theory (Deci & Ryan, 1985, 2000, 2008), however, suggests that this process may be more nuanced than previously assumed.

Self-determination theory (Deci & Ryan, 1985, 2000, 2008) is an expansive theory of motivation and well-being that incorporates elements of personality, development, and basic psychological needs. Recently, researchers have argued that self-determination theory provides a unique and comprehensive framework for romantic relationship functioning (Knee, Hadden, Porter, Rodriguez, 2013; La Guardia & Patrick, 2008). Most of the research investigating self-determination in relationships has focused on how self-determined motivations promote relationship quality via overt forms of romantic relationship maintenance mechanisms, such as constructive approaches to conflict (e.g., Knee, Lonsbary, Canevello, & Patrick, 2005) and support provision (Hadden, Rodriguez, Knee, & Porter, 2015). As such, the present research was designed as the first step toward integrating the literature on preemptive covert relationship

maintenance mechanisms with a self-determination theory perspective by examining the influence of self-determination on derogation of attractive alternative partners. In so doing, the proposed research will aim to more completely elaborate the comprehensive nature of self-determination theory as a framework for understanding close relationships by outlining and testing hypotheses regarding derogation of alternatives.

Derogation of Alternatives

People are social creatures who are quick to form new relationships and reluctant to dissolve existing ones (Baumeister & Leary, 1995). Close relationships are a universal given of life, considered by many theorists to be a basic psychological need (e.g., Baumeister & Leary, 1995; Bowlby, 1951; Deci & Ryan, 2000). Indeed, the fulfillment of people's well-documented need to feel connected to others is a major predictor of both healthy physical and mental development (e.g., Cohen, 1994). Romantic relationships are especially important for outcomes such as mental and physical well-being (Myers, 2000; Parker-Pope, 2010) and are conceptually different from other forms of close relationships (e.g., Aune & Comstock, 1991; Keener, Strough, & DiDonato, 2012; Salas & Ketzenberger, 2004). For instance, in adult populations romantic partners tend to be primary attachment figures (Hazan & Shaver, 1994). As such, romantic relationships are considered especially important to understand, given their unique and powerful effect on well-being.

Despite the importance of romantic relationships, the maintenance of relationships is a difficult task. No partner is perfect, and no person can completely live up to one's ideals. Further, coordinating with one's romantic partner means that one's own immediate self-interest will at some point conflict with one's partner's interests (e.g., Gottman, 1994; Holmes, 1989; Van Lange et al., 1997). As such, relationship researchers have invested a great deal into investigating

a wide range of ways in which people navigate the, at times less than ideal, world of their romantic relationships. To that end, researchers have amassed a considerable literature outlining a general model of persistence that examines how people resolve or avoid a variety of destabilizing events in their relationships (Rusbult, Olsen, Davis, & Hannon, 2001), identifying a number of relationship maintenance mechanisms that vary along several dimensions. For instance, relationship maintenance mechanisms vary in the degree to which they are 1) behavioral versus cognitive, 2) covert, subconscious versus observable, conscious decisions, 3) used preemptively to avoid pitfalls or reactionary to minimize damage caused by conflicts, and 4) motivated from perceived threat versus natural perceptual changes (Simpson et al., 2001).

One of the biggest threats to perseverance in one's romantic relationships is the lure of attractive alternative partners. As described in interdependence theory (e.g., Kelley, 1983; Kelley & Thibaut, 1978; Thibaut & Kelley, 1959) and in Rusbult's Investment Model (e.g., Rusbult, 1980, 1983), the availability and quality of potential alternative partners are major components of commitment to one's relationship. That is, the more alternative partners one perceives to be available and the higher quality those alternative partners are, the lower one's commitment to a given romantic relationship will be (Rusbult, 1983). Thus, alternatives pose a significant threat to one's sense of relationship commitment, as they serve as a temptation to leave one's partner for greener pastures. However, leaving an existing relationship for a new partner is risky, and when people have invested a great deal in their relationship, leaving can also be very costly. As such, it is clear that mechanisms that alleviate such temptation would be adaptive. Indeed, a wide body of research examining reactions to alternative partners reveals that, in response to the destabilizing force of alternatives, people have a tendency to derogate the attractiveness of potential alternative partners (e.g., Johnson & Rusbult, 1989; Lydon, Fitzsimons, & Naido, 2003;

Miller, 1997; Miller & Maner, 2010; Miller, Prokosch, & Maner, 2012; Pronk, Karremans, & Wigboldus, 2011; Simpson, Gagnestad, & Lerma, 1990).

Derogation of alternatives (Johnson & Rusbult, 1989) refers to devaluing the attractiveness of potential alternative partners, such that ratings of threatening individuals are lower than expected. This has traditionally been measured by having people provide ratings of both threatening (i.e., attractive opposite sex) and non-threatening targets. Across the literature, results generally support findings that while more committed people generally rate non-threatening pictures no differently than do less committed individuals, people who are more committed rate pictures of attractive, opposite sex individuals as less attractive than people who are less committed. For instance, people in relationships rate attractive opposite sex people as less appealing than do uncoupled people (Simpson et al., 1990; Study 1) and the more commitment to their current relationship that people report, the smaller the differences are between ratings of attractive, opposite sex targets and average or non-attractive targets (Johnson & Rusbult, 1989). Derogation also appears to influence memory, such that when shown either an attractive or unattractive face, people in relationships reconstruct attractive faces as less attractive than they really were (Karremans, Dotsch, & Corneille, 2011).While some early research has questioned whether the phenomenon is truly due to derogation rather than due to uncoupled or non-committed people exaggerating the attractiveness of appealing targets (Bazzini & Shaffer, 1999), subsequent research has resolved this controversy, arguing in favor of the devaluation rather than the enhancement process (e.g., Lydon et al., 2003).

Preemptive covert relationship maintenance. Derogation of attractive alternatives is a type of relationship maintenance strategy that falls under the more general umbrella of preemptive covert relationship maintenance mechanisms (Simpson et al., 2001). Preemptive

covert mechanisms can be distinguished from other forms of relationship maintenance mechanisms (e.g., reactionary or overt) based on (1) the timing/situation in which the mechanisms are used and (2) the degree to which the mechanisms are consciously engaged in. The form of relationship maintenance that occurs following a threat or conflict is referred to as reactionary maintenance. Reactionary strategies are used in attempts to minimize or repair damage that has already occurred following a transgression or other relationship destabilizing event. Essentially, reactionary maintenance mechanisms are used to right the relationship once a problem has already arisen and the relationship needs to be fixed in some way (Simpson et al., 2001). For instance, the way in which one approaches conflict with one's partner is vitally important to the success of the relationship (Gottman, Coan, Carrere & Swanson, 1998), as defensive or critical responses can lead to an attack-defend mode that inhibits finding a mutually beneficial solution to a problem (Gottman, 1993).

Preemptive mechanisms, on the other hand, are behaviors or cognitive tactics that serve the function of minimizing or avoiding relationship threats *before they happen* (Simpson et al., 2001). In essence, preemptive mechanisms are adaptive in that they help one to avoid future problems and keep the relationship on course. For instance, Harvey and Omarzu (1997) outlined a class of overt, conscious preemptive relationship maintenance mechanisms referred to as "minding," which constitutes behaviors such as disclosing important aspects of oneself and eliciting self-disclosure from one's partner. Such relationship maintenance is consciously and purposefully used to demonstrate acceptance of partners and build intimacy. Derogation of alternatives is similarly preemptive, operating to avoid the temptation of alternatives and minimizing the threat posed to one's own commitment (Simpson et al., 2001).

Covert mechanisms such as derogation of alternatives are defined by their subconscious and arguably automatic nature (Simpson et al., 2001), and result in changes in one's perception. In other words, people tend to be relatively unaware of their own use of covert maintenance mechanisms. To be aware of these mechanisms would largely defeat the purpose. Derogation of alternatives, for instance, serves to maintain one's sense of commitment by creating the impression that other alternatives are less attractive. It is difficult to imagine such a mechanism working if people recognized that they were artificially deflating the attractiveness of others. As such, covert mechanisms mainly occur as subconscious cognitive or perceptual mechanisms, rather than conscious behaviors and involve positive changes in the assessments or inferences drawn about one's relationship, such that one is more satisfied or committed to the relationship. That is, covert forms of relationship maintenance tend to bias people toward being more committed than they might otherwise be. Usually, this is done by influencing perceptions such that an event or characteristic of the relationship or partner is seen in a better or less threatening light.

Is derogation motivated or perceptual? Covert relationship maintenance mechanisms can be broken down into two main categories according to the extent to which the use of such mechanisms are motivated cognitive processes or simply perceptual processes (e.g., Johnson & Rusbult, 1989; Rusbult et al., 2001). Motivated processes occur specifically to reduce a threatening cognition and to actively maintain commitment to one's relationship (Johnson & Rusbult, 1989). That is, whenever a relationship threatening event occurs, people may be led to question their commitment to their romantic relationship. However, people also have a deep underlying desire to preserve romantic relationships (Baumeister & Leary, 1995). To the extent that the threatening cognitions are equal to one's commitment such that the choice to leave or

stay is difficult, people will experience dissonance regarding their current relationship (Lydon, Meana, Sepinwall, Richards, & Mayman, 1999; Lydon, Fitzsimons, & Naido, 2003). In order to resolve or preempt this dissonance, people rely on covert relationship maintenance mechanisms that reduce the threatening cognition and minimize the doubts about their relationship.

Somewhat contrary to motivated processes are purely perceptual maintenance mechanisms that involve a change in awareness. Perceptual processes involve changes in comparison levels or the details that people attend to or consider relevant in a given situation. According to Interdependence Theory (Kelley & Thibaut, 1978) the measuring stick by which people judge potential alternative partners, for example, is at least partially influenced by current outcomes in our relationships. Thus, the attractiveness of others might be influenced by the attractiveness of people's own partners. Additionally, goals influence the relevance of information and bias the details people attend to and what people ultimately perceive. For instance, uncoupled people are more likely to be motivated by relationship-seeking goals, and thus, pay more attention to signs that potential partners are romantically interested, whereas people already in relationships will pay less attention to such cues (Bredow et al., 2008). The details that people in relationships pay attention to can play a significant role in relationship maintenance. For instance, the transformation of goals from relationship-seeking to relationship-maintaining may lead to less temptation to be lured away, as it reduces the attention people pay to attractiveness or reciprocal interest (Koranyi & Rothermund, 2012)

Is derogation of alternatives motivated or perceptual? In their seminal study, Johnson and Rusbult (1989) laid out two possible explanations for derogation of alternatives, both emerging from work on interdependence theory. First, they proposed a motivated cognitive mechanism that results from cognitive dissonance. When presented with an appealing

alternative, people who are more dependent and committed will experience conflicting cognitions. In attempting to resolve this conflict, people will reduce the value and appeal of the alternative by emphasizing negatives and downplaying positives (Kelley, 1983; Kelley & Thibaut, 1978; Thibaut & Kelley, 1959). This serves to maintain the relationship by allowing one to assert that their decision to be with their current partner is the right choice. Second, derogation may occur as the result of unmotivated perceptual processes. According to this account, one's own relationship acts as a comparison level or measurement to which other possibilities are compared. When one's relationship is perceived as very satisfying, potential alternatives will be perceived as less appealing than people in less satisfying or no relationships.

Importantly for the sake of the current research, derogation of alternatives appears to be a motivated cognitive relationship maintenance mechanism. That is, derogation of attractive alternatives occurs as a response to threats to one's own sense of relationship commitment, rather than simply from a perception of comparison levels or deactivation of relationship-seeking goals. For instance, in attempting to tease apart these explanations, Johnson and Rusbult (1989) rationalized that whereas a motivated perspective suggests that commitment and dependence act as primary motivators of derogation, the comparison levels are drawn largely from satisfaction. Thus, a defensive mechanism would be more strongly tied to commitment, whereas a perceptual account would be linked to satisfaction. They tested these competing explanations by having participants read a vignette and imagine themselves as the protagonist at a party (Study 3). Participants were randomly assigned to two manipulations, one of satisfaction and one of commitment. They found that participants assigned to the high commitment condition devalued ratings of a hypothetical alternative partner, but those in the satisfaction condition did not.

Further research has provided more direct tests of the motivational nature of derogation. For instance, there is evidence that attractive alternatives are perceived as a literal threat such that committed individuals are more likely to mistakenly shoot unarmed attractive people in replications of the shoot/don't shoot paradigm (Plant, Kunstman, & Maner, 2010). That is, when deciding whether or not a target is holding a gun, the most errors occurred with highly committed people mistakenly choosing to shoot unarmed attractive people. Another line of research has found that people only derogate the attractiveness of alternatives if the threat matches levels of commitment (Lydon et al., 2003). That is, people who were moderately committed (i.e., exclusively dating) showed a tendency to rate attractive targets lower than people who were less committed (i.e., uncoupled or casually dating) and people who were highly committed (i.e., married). However, when presented with attractive targets that were both available and interested, only highly committed people exhibited a pattern of devaluation. These results were in line with the calibration hypothesis (Lydon et al., 1999), which asserts that people will only be motivated to defend their relationships against temptation when that temptation matches their levels of commitment. When alternatives are unambiguously better or worse than current partners, the choice is clear and dissonance is easily resolved. However, when the threat matches the current relationship, the choice is not clear. Thus devaluation occurs as a means of protecting one's relationship from temptation (Lydon et al., 2003) or lingering thoughts (Karremans et al., 2011).

Self-Determination Theory

Self-determination theory (Deci & Ryan, 2000) is a theory of motivation that incorporates elements of personality, development, and basic psychological needs to describe growth and development of a "true" self. One of the key elements of self-determination theory is

the distinction made between parts of the self that are motivated by internal or external pressures (i.e., incentives, expectations) and those parts that are motivated by a core-self composed of fully integrated values, interests, and awareness of needs. Self-determination theory emphasizes the importance of the degree to which one's actions and choices are authentic and reflect a true awareness of one's basic psychological needs, and the capacity of one's social environment to support them. Self-determination theory's concept of self is centered on a process known as integration, in which behaviors become integrated within one's sense of identity. Behaviors can be integrated to various extents, representing one's identity to greater or lesser degrees. According to self-determination theory (Deci & Ryan, 1985, 2000, 2008), to be self-determined means that one's actions are guided by one's core-self. That is, one engages in activities due to freely chosen and fully endorsed reasons rather than because of pressures from external forces or internal expectations.

Full integration is considered to be the optimal outcome of development, and, according to self-determination theory, people have a natural tendency to integrate behaviors and values (Deci & Ryan, 2000). Despite this tendency, integration is not inevitable. The process of integration depends on the extent to which situational and developmental factors support one's basic psychological needs (Deci & Ryan, 2000). If situations exert considerable control or pressure over an individual, integration will be thwarted. However, if situations allow for autonomous functioning and promote a person's free exploration, people will tend to integrate behaviors within their self. In this review, the references to the "self" refer to this core- or true self as defined by self-determination theory. That is, "self" refers to the part of one's self-concept that has been more integrated into one's identity, and is genuinely endorsed.

What is self-determination? As mentioned earlier, self-determination theory differentiates between activities, behaviors, and values that are motivated from one's true self and those that are motivated by external factors. The extent to which behaviors are motivated (or not) by the self can be arranged along a continuum of self-determination, from being entirely self-determined to entirely not self-determined. At the high end of the continuum are people whose actions are motivated by their true self. This highest form of self-determination is known as intrinsic motivation, meaning that one is acting out of genuine interest. When action is intrinsically motivated, one engages in the behavior out of pure enjoyment and the activity is said to be fully integrated within oneself. One step below intrinsic motivation is integration, in which people engage in behaviors that resonate with higher order or overarching identities. Although these behaviors are mostly endorsed, they have not been completely integrated into one's true self. Below integration are identified behaviors which are enacted out of their importance to the self and are more or less self-endorsed. However, as the behavior is not engaged in out of pure interest and is not tied directly to a higher value, but to some benefit, these behaviors are not considered to be as self-determined as either intrinsic or integrated behaviors.

Behaviors can also be motivated for more separable reasons. Internal pressures such as guilt reflect a form of motivation that is known as introjection. Introjection is noted by feelings of oughts and shoulds that are imposed upon oneself. Although one is responsible for this pressure, the activity is far from being internalized within one's true self and is not valued on its own. Farther down the self-determination continuum is extrinsic motivation, which is characterized by feelings of external pressure. This can be due to social expectations or demands from people around them. Finally, at the far low end of self-determination is amotivation. Amotivation is the lack of intention or motivating force for a given behavior. People who are

amotivated are generally unaware of any reason to act, and will simply "go through the motions."

The degree of self-determination can be conceptualized hierarchically from a global "trait" level to situational (Vallerand, 1997). That is, people can be described as being more self-determined, meaning that they tend to me more internally motivated than others across situations. Self-determination can then be broken down into domain-specific operationalizations, and conceptualized in terms of the degree of domain autonomy, or the extent to which engagement in domain-specific behaviors is self-determined and choiceful. For instance, people can be described in the degree to which they are internally motivated to be in their close relationships (Blais et al., 1990). Empirical evidence supports this hierarchal model of motivation (Vallerand, 1997), as general level motivations have been shown to be an effective predictor of various domain-specific approaches (Vallerand & Ratelle, 2002). For instance, trait autonomy predicts more domain-specific autonomy such as in learning (Williams & Deci, 1996), exercise (Williams, Grow, Freedman, Ryan, & Deci, 1996), and romantic relationships (Knee et al., 2005).

Basic psychological needs. Self-determination theory proposes that people have a natural tendency to integrate the self into a coherent, unified entity (Deci & Ryan, 1985). In this sense, to be self-determined is considered a natural and optimal state. Further, self-determination theory specifies situational factors that lead to more complete integration. More specifically, self-determination theory proposes that integration occurs as the result of fulfillment of three basic psychological needs: Relatedness, competence, and autonomy (for review, see Deci & Ryan, 2000). Relatedness refers to a sense of belongingness, intimacy, and a feeling of connection to others. Competence is the need to feel that one is a capable and effective agent within one's

environment. Autonomy is defined in SDT as a feeling that one's actions are freely chosen and self-governed. In close relationships, this is taken to mean that one's involvement in the relationship is endorsed fully rather than coerced or pressured out of guilt or incentives (Deci & Ryan, 2000, 2002). Autonomy refers to the feeling that one's behaviors are self-directed rather than controlled by external or internal pressure. It is important to distinguish this from other definitions of autonomy which include reflexive independence and detachment. Autonomy as defined by SDT says nothing about a desire either to feel independent from or to not rely upon others. Instead, autonomy in this context means that one acts in ways that one truly endorses. Crucially, this does not imply conflict between other's desires and one's own desires will necessarily inhibit feelings of autonomy. In fact, autonomy and relatedness are often seen to go hand in hand (Deci & Ryan, 2000), indicating that the way in which the conflict is resolved is more important than simply getting what one wants. For instance, if the conflict is resolved by coercion or guilt, this will inhibit feelings of autonomy. But if the conflict is resolved by an open discussion or genuine desire to sacrifice for one's partner that emerges from the self, the need for autonomy can still be highly satisfied.

Further, need fulfillment arises out of the interaction between the person's needs and the environmental context (Patrick, Knee, Canevello, & Lonsbary, 2007). That is, the environment can be supportive of one's needs or can thwart them to varying extents. The degree to which needs are supported or thwarted can also vary over time and across situations. As such, needs can be conceptualized hierarchically, from a general sense that needs are fulfilled or thwarted, down to specific contexts that provide support or frustration of needs (e.g., within a specific relationship). A wide variety of research supports the connection between overall need fulfillment and optimal functioning. For instance, need fulfillment has been previously linked to

better well-being (e.g., Reis, Sheldon, Gable, Roscoe, & Ryan, 2000; Sheldon, Ryan, & Reis, 1996) and vitality (e.g., Nix, Ryan, Manly, & Deci, 1999).

Taken together, self-determination theory posits that all three needs are necessary for integration, development of self-determined motivations, and optimal functioning (Deci & Ryan, 2000). When one's needs are consistently fulfilled rather than thwarted, one will generally be more self-determined and autonomously motivated (Ryan, 1995; Patrick et al., 2007). As such, in discussing the effects of self-determination, it can generally be taken that similar predictions for need fulfillment and motivation can be derived. However, as motivations are commonly thought to be the proximal cause of many outcomes, the present research will focus mainly on levels of autonomous motivations.

Self-determination in romantic relationships. Research on self-determination in relationships has operationalized self-determination as having more autonomous reasons for being in the relationship (Blais et al., 1990). This internal form of motivation is commonly referred to as relationship autonomy. Relationship autonomy reflects an authentic engagement in one's relationship, and that one's motivations to be involved in the relationship emerge out of a genuine interest in the relationship, rather than an interest that arises from some separable outcome. In this sense, when people are higher in relationship autonomy, their desire to be in a given relationship emerges from their true self and they more fully endorse being in their relationship. Conversely, people lower in relationship autonomy have not integrated their relationship within their selves, and are rather with their partners because of some external pressure such as fear of being alone, or a desire to prove oneself as valuable (Hodgins & Knee, 2002). Furthermore, research on self-determination in relationships has found that relationship autonomy (e.g., Blais et al., 1990) and need fulfillment (Patrick et al., 2007) are related to more

adaptive relationship behaviors and overall quality of relationships. For example, Blais and colleagues (1990) found that relationship autonomy was associated with more consensus between partners, better teamwork, and overall higher satisfaction in the relationship.

The benefits of relationship autonomy and need fulfillment have mostly been explained by a lack of ego-involvement, which is defined as the sense that one's self-concept is "on the line" (e.g., Hodgins, 2008; Hodgins & Knee, 2002; Hodgins et al., 2010). The integration of a relationship within oneself leads to lower ego-involvement and a more intrinsic sense of self-worth. This leads to higher tolerance for threatening information (e.g., Hodgins, 2008; Hodgins & Knee, 2002) and allows for one to focus less on the implications a given situation has for one's self-concept and to focus more on approaching relationship interactions with greater authenticity and fewer attempts to craft a specific image of oneself (Hadden, Øverup, & Knee, 2013; Hodgins, Koestner, & Duncan, 1996). Lower ego-involvement is also associated with a tendency to approach relationship conflicts in non-defensive ways. That is, one instead sees disagreement as an opportunity to understand and become closer to one's partner (Knee, Patrick, Vietor, Nanayakkara, & Neighbors, 2002). In this sense, relationship autonomy allows for increased openness and decreased defensiveness during relationship interactions which in turn predicts higher relationship quality (Knee et al., 2005).

Self-determination is also associated with a genuine desire to care for and support one's partner (Knee et al., 2013). In addition to simply reducing ego-involvement and allowing for more non-defensive reactions, recent work suggests that need fulfillment and relationship autonomy are both associated with more pro-partner motivations. For instance, people who feel their partners satisfy their need for relatedness (and autonomy) are also more compassionately oriented—defined as having goals to care for one's partner with no intended outcome for

oneself—which in turn predicts increases in satisfaction for partners over time (Hadden, Smith, & Knee, 2014). Additionally, people who are higher in relationship autonomy tend to provide more support for their partners (Hadden et al., 2015). Across three studies, Hadden and colleagues (2015) found that relationship autonomy predicted a variety of supportive behaviors. In studies 1 and 2, participants reported on their levels of relationship autonomy, responsiveness, and support provision. Their results suggested that people higher in relationship autonomy were not only more responsive and supportive, but tailored levels of support according to their partner's needs. Study 3 found that relationship autonomy predicted higher willingness to sacrifice, and less perceived cost associated with sacrificing. Taken together, their results suggest that when people are higher in relationship autonomy, they also focus more on partner's needs, and genuinely want to care for their partners. The association between relationship autonomy and pro-partner motivation makes sense when one conceives of relationship autonomy as a genuine desire to be with one's partner that emerges from one's self. The relationship has been integrated within oneself, and one truly values supporting one's partner. Importantly, this may also suggest differential activation of goals, such that people who are more autonomously motivated to be in their romantic relationships or feel their basic psychological needs are being met will have more strongly activated relationship-promoting goals, and lower activation of relationship-seeking goals.

Autonomy and Derogation of Alternatives Model (ADAM)

Self-determination theory provides a unique perspective on the usage of derogating alternatives. Although the current literature suggests that derogation occurs as a main effect of relationship commitment and dependence, and that derogation is generally good for relationships (.e.g., Lydon et al., 2003; Johnson & Rusbult, 1989), a self-determination theory perspective

suggests a more nuanced view. Specifically, the current literature on derogation of alternatives has not considered the possible role of motivation. As such, I propose the Autonomy and Derogation of Alternatives Model (ADAM), which asserts that the use and effectiveness of derogation is not universal, and is in fact moderated by both general and relationship specific levels of autonomous motivations.

Why would autonomy moderate the tendency to derogate alternatives? Previous research has consistently found that when people's basic psychological needs are satisfied or they are more autonomously motivated, they are also less likely to respond defensively to threatening information (e.g., Hodgins, 2008; Hodgins & Knee, 2002). That is, when one's basic psychological needs are fulfilled and one is thus more self-determined, people do not feel the need to prove or assert themselves. For example, participants primed with autonomous motivations were more comfortable while giving a speech (Hodgins et al., 2010) and autonomous motivations are associated with fewer self-serving biases, indicating more comfort dealing with negative information about one's self-concept and less need to defend against personal threats (Knee & Zuckerman, 1996, 1998). Within relationships specifically, both need fulfillment and relationship autonomy have been found to predict more openness and less ego-involvement (Knee et al., 2005; Patrick et al., 2007).

I also expect that autonomy should buffer the association between commitment and derogation of alternatives because such alternatives are seen as less tempting, and thus are less likely to affect one's commitment. Some research has found that in addition to just being associated with higher commitment (Patrick et al., 2007) relationship autonomy is also associated with lower self-reported variability in relationship commitment (Porter, 2013). In short, people who are in their relationships for more autonomous reasons are more likely to

perceive less fluctuation in their day to day commitment. As such, to the extent that one's relationship is more fully integrated within oneself, the attractiveness of others should serve as less of a temptation to leave one's relationship. I draw this proposition from previous findings pointing to the use of derogation of alternatives as a defensive mechanism, buffering oneself against threats to commitment. Thus, derogation should be most effective for and thus most likely to be used by people who are in their relationships for less self-determined reasons. This should occur primarily because people who are not in their relationships for self-determined reasons are, by definition, involved in their relationships for some other outcome beyond genuine desire to be with one's partner (Blais et al., 1990). Put another way, people lower in relationship autonomy are not focused on their partner, but on some other external feature, such as dating for status. As such, alternative partners may be tempting because it is not the uniqueness of the relationship or bond with one's partner that matters, and others may be better able to provide those benefits. Take, for example, someone who is not self-determined, and who is dating his or her partner because the partner is very attractive and because friends regularly comment on how attractive his or her partner is. In this case, there are many other partners who can presumably bring the same benefits, and thus, temptation is much higher when interacting with or seeing another attractive person. This temptation is countered by a desire to preserve one's relationship, as any relationship with the alternative is riskier than the current relationship. Thus, in order to resolve the temptation and the desire to maintain one's commitment to one's relationship, those external qualities are devalued.

However, when one is high in relationship autonomy, and thus, one's relationship is integrated within one's true self (Knee et al., 2013), alternative partners should be fundamentally less tempting. Whereas people lower in relationship autonomy are focused on external features

that alternative partners can replace, such as attractiveness or wealth, people higher in relationship autonomy are genuinely interested in their relationship. In other words, such people are not as motivated by such extrinsic values (Rodriguez, Hadden, Knee, 2015). Rather, people higher in relationship autonomy are more interested in knowing and understanding one's partner's true self. As a result, attractive alternative partners should not present as much temptation to be lured away from one's current partner. First, as mentioned earlier, being self-determined should alter one's goals, such that the goal of looking for attractive new partners is not as salient or activated, but caring for one's partner and minding one's relationship is more salient, relative to those who are less self-determined. Without such a goal of finding a new or better partner, attractive others should not register as an alternative. Thus, there should be less dissonance, as one does not consider the person to be a temptation. Second, as the focus of people who are more self-determined is on more intrinsic values, and less on ideals such as attractiveness or money, the benefit of alternative partners over current partners should not be readily apparent, and thus, should not be as tempting. Put another way, while attractiveness is readily apparent, characteristics such as warmth, caring, and loyalty, are less obvious (Rodriguez et al., 2015). Thus, especially when one does not have a significant relationship with the target, people higher in relationship autonomy should not be as tempted by alternative partners, and not exhibit the same pattern of derogation.

In sum, relationship autonomy should serve to reduce the usefulness of derogation of alternatives. While derogation is useful for people to the extent that they are not intrinsically motivated to be in their relationships, this usefulness diminishes as relationship autonomy goes up. This is primarily because integration of one's relationship should reduce the temptation of

alternative partners because of a genuine interest in one's own relationship that reduces the activation of relationship-seeking goals.

Overview of Studies and Hypotheses

The present research was designed to test the potential moderating influence of self-determination on the link between commitment and the derogation of alternatives. Three studies examined this association. In all three studies, participants were asked to view a series of pictures and rate the person in the picture (the target) according to his or her attractiveness. Study 1 was a cross-sectional design that assessed the moderating role of relationship autonomy. Study 2 was an experimental design that attempted to manipulate relationship autonomy in order to establish a causal effect of relationship-specific motivation. Finally, Study 3 was a cross-sectional design that examined the phenomenon in a more general population and explored whether and how derogation and autonomy functions in a non-college student population. Additionally, the studies used two operationalizations to distinguish between threatening and non-threatening faces. Across all three studies, threatening faces were attractive opposite-sex faces. In Study 1, non-threatening faces were composed of unattractive opposite-sex faces. Studies 2 and 3 used attractive same-sex faces as non-threatening faces.

Additionally, researchers typically describe derogation of attractive alternatives as a defense mechanism to preserve one's own commitment to the relationship. Although a wide body of research has found that both quantity and quality of perceived alternatives predicts relationship commitment (e.g., Drigotas & Rusbult, 1992; Rusbult, 1980; Rusbult, Martz, & Agnew, 1988), the effectiveness of derogation as a means of maintaining commitment has not, to my knowledge, been previously tested. As such, the present research also sought to test both the association between derogating threatening alternatives and decreases in commitment, and the

potential moderating role of relationship autonomy. To this effect, Studies 1 and 2 included both pre-rating and post-rating measures of commitment in order to test the possible role of attractive alternatives on commitment.

Hypothesis 1 – Derogation of attractive alternatives

Hypothesis 1a. I expected to replicate prior work on derogation of alternatives (e.g., Johnson & Rusbult, 1989) and hypothesized that people who are more committed to a romantic relationship would rate threatening photos (i.e., attractive opposite-sex faces) as less attractive than did people who are not as committed.

Hypothesis 1b. I expected no such relationship for non-threatening photographs (i.e., unattractive opposite-sex faces or same-sex faces). That is, threat would moderate the relationship between commitment and ratings such that more committed people only rated threatening photos as less attractive than did less committed people, but there would be no difference for non-threatening photos.

Hypothesis 2 – Relationship autonomy and derogation.

Hypothesis 2a. In addition to the previously established derogation model, I expected to find that relationship autonomy significantly reduced the extent to which one derogated attractive alternatives. That is, I hypothesized that highly committed people only rated threatening photos (i.e., attractive opposite-sex faces) as less attractive if they were low in relationship autonomy. Put another way, people high in relationship autonomy would not differ in their ratings as a function of commitment, whereas people low in relationship autonomy would rate threatening faces as less attractive the more committed they were. Importantly, I expected that this would occur for both measured (Studies 1 and 3) and manipulated forms of relationship autonomy (Study 2).

Hypothesis 2b. However, I expected no such relationship for non-threatening faces (i.e., unattractive opposite-sex faces or same-sex faces). That is, threat would moderate the above effect such that autonomy and commitment would interact to predict ratings of threatening photos, but there would be no such interaction with non-threatening photos (Hypothesis 1b).

Hypothesis 3 – Derogation and change in commitment. According to existing literature, the primary reason people high in relationship autonomy would not derogate alternatives is that alternatives do not threaten commitment. As such, I expected that people who rated threatening faces as more attractive would exhibit a larger drop in commitment from pre-rating to post-ratings of commitment.

Hypothesis 4 – Relationship autonomy and change in commitment. I also expected that, for those higher in relationship autonomy, the extent to which one derogated attractive alternatives would not predict change in one's commitment. However, for those lower in relationship autonomy, less derogation (higher ratings) would be associated with decreases in relationship commitment.

Study 1

Study 1 was intended to provide preliminary evidence for the moderating role of relationship autonomy. This study measured commitment and relationship autonomy, then asked participants to look at a series of photographs of threatening (attractive opposite-sex) and non-threatening (unattractive opposite-sex) faces. When looking at these photos, participants both rated their attractiveness and decided if the person was a potential dating partner. As noted above, I expected to find the traditional pattern of derogation such that higher commitment, relative to lower commitment, was associated with a lower percentage of attractive opposite-sex faces being perceived as alternatives (Hypothesis 1a). There would be no such observed pattern

for non-threatening (unattractive opposite-sex) faces (Hypothesis 1b). Critically, I expected that relationship autonomy would moderate the association between commitment and evaluations of threatening faces (Hypothesis 2a), but not for non-threatening faces (Hypothesis 2b). Finally, I also expected that higher ratings of threatening faces would predict residual decrease in commitment (Hypothesis 3), but that this should occur primarily for those who are lower in relationship autonomy (Hypothesis 4).

Method

Participants. Participants were 562 undergraduates recruited from the SONA pool at the University of Houston and awarded class credit for participation. Participants were all currently involved in an exclusive romantic relationship of at least three months, to ensure they had sufficient experience with their romantic partner. Additionally, all participants included in the analyses were heterosexual. Of the participants, 416 were female (81%) and 98 were male (19%). The average age of the participants was 22.38 years old (SD = 5.02) and the average duration of the relationship was 30.36 months (SD = 33.80). Further, 4% of participants were casually dating, 66% were exclusively/seriously dating, 21% were engaged/nearly engaged, and 9% were married. The sample was ethnically diverse, with 27% Latino/a, 31% Caucasian non-Hispanic, 17% Asian/Pacific Islander, 23% African American, and 2% other.

Procedure. Participants signed up for the study online, where they were instructed to complete the survey alone in a place of their choosing. They were directed to a survey that asked about their general levels of relationship motivation, relationship commitment, and several filler questionnaires. Next, they were shown a series of pictures of faces and asked to rate the attractiveness of the face. Importantly, the participants were told that these pictures were of single/uncoupled students at the University of Houston who had agreed to participate in a

separate speed dating exercise. They were told that their ratings were to be used as pilot data to help us gauge the attractiveness of these ostensible speed dating participants. The faces consisted of both threatening (attractive opposite-sex) and non-threatening (unattractive opposite-sex) photographs. Immediately after rating photos, participants again reported their level of relationship commitment. Finally, participants were debriefed and awarded credit.

Measures.

Rusbult Investment Model – Commitment Subscale (Appendix A). Commitment to one's relationship was measured using this 7-item scale (Rusbult, Martz, & Agnew, 1998). Participants rate items related to their commitment (e.g., "I am committed to maintaining my relationship with my partner") on a 9-point likert-type scale (pre: $\alpha = .91$; post: $\alpha = .91$).

Couples Motivation Questionnaire (CMQ) (Appendix B). This 18-item scale (Blais et al., 1990) was developed to measure relationship autonomy and has been widely used throughout the literature on self-determination in relationship contexts (e.g., Brunell & Webster, 2013; Gaine & La Guardia, 2009; Hui, Molden, & Finkel, 2013; Knee et al., 2005; Patrick et al., 2007). The scale has 6 subscales with 3 questions each that represent the 6 different levels of internalization: Intrinsic, integrated, identified, introjected, external, and amotivated. The questionnaire begins with the stem, "Why are you in the relationship?" Each of the 18 items then provides a reason for being in the relationship that varies along a continuum from reasons that are less self-determined (e.g., "There is nothing motivating me to stay in my relationship with my partner") to more self-determined (e.g., "Because I value the way my relationship with my partner allows me to improve myself as a person"). The scale is scored with the following algorithm (Blais et al., 1990) that weighs each type of intention based on its relative location on the self-determination continuum: (Intrinsic*3)+(Integrated*2)+(Identified*1)+(Introjected*-

1)+(External*-2)+(Amotivation*-3). Amotivated and autonomous motivations are treated as two poles of the self-determination continuum ($\alpha = .75$). Participants rated how much each statement represents a reason they are currently in their relationship on a 7-point likert-type scale from "does not correspond at all" to "corresponds exactly."

Evaluation of Alternative Partners (Appendix C). Participants were shown 20 total pictures: 10 attractive opposite-sex (threatening) and 10 unattractive opposite-sex (non-threatening). The photos were selected from a pool of photographs made publically available by the Park Aging Mind Laboratory (Minear & Park, 2004). The total dataset consists of 59 female photos and 84 male photos. Faces in the photos are all smiling, are racially diverse, and are between 18 and 29 years of age. Photos were selected based on the results of a pilot test, in which uncoupled UH students (48 females and 26 males) rated the attractiveness of opposite-sex faces with three questions used in prior research (e.g., Miller, 1997; "How physically attractive is s/he?", "How much sex appeal does s/he have?", and "How much would you like to meet him/her?") along a 10-point scale from 1 (not at all so) to 10 (very much so). A composite score was created by averaging all three questions, and the 10 most attractive and 10 least attractive of each gender were selected for use in the present study. In the pilot study, attractive female faces ranged from 4.89 to 6.36 whereas unattractive female faces ranged from 2.22 to 2.55. Attractive male faces ranged from 5.04 to 6.84 whereas unattractive male faces ranged from 1.50 to 1.88. In Study 1, I used two different evaluations of attractiveness. First, I used the same three items as in the pilot study, averaged for a continuous composite score ($\alpha = .91$). Second, as in some previous research on derogation (Meyer, Berkman, Karremans, & Lieberman, 2011; Ritter et al., 2010), attractiveness was also measured with a yes-or-no decision about whether the person

would be considered an alternative ("Would you consider this person to be a potential partner, irrespective of your current relationship status?").

Results

Plan of Analysis

To assess attractiveness, we averaged the three questions (attractiveness, sexual appeal, and desire to meet) for each target. Both continuous predictors— commitment and relationship autonomy— were grand-mean centered prior to all analyses. Threat condition was dummy-coded (0 = unattractive, 1 = attractive).

Analyses of continuous ratings of attractiveness (i.e., composite score of physical attractiveness, sex appeal, and desire to meet) and yes/no decisions whether they would consider dating the person were run in parallel models. That is, identical models were run using both the continuous and dichotomous variables as the outcomes. When continuous ratings of attractiveness were treated as the outcome, because participants made multiple ratings, analyses were conducted using multilevel modeling using the SAS 9.4 PROC MIXED procedure to account for the non-independence within participants' ratings. When dichotomous yes/no responses were treated as the outcome, analyses were conducted using logistic multilevel modeling using the SAS 9.4 PROC GLIMMIX procedure to account for the non-independence within participants' ratings, specifying a dichotomous outcome with a binomial distribution. Commitment and relationship autonomy were treated as between-person (level 2) variables, whereas threat condition was treated as a within-person (level 1) variable.

Preliminary Analyses

Means, standard deviations, and correlations between all between-person variables are reported in Table 1. Attractiveness ratings are reported separately by condition (threatening v.

not-threatening) and were computed by averaging ratings within participants. Ratings of threat and non-threat photos were positively associated, meaning that participants who gave higher ratings tended to do so for both groups. Ratings were unrelated to either measure of commitment or relationship autonomy. Meanwhile, both pre- and post-rating commitment were positively associated with relationship autonomy. A dependent samples t-test revealed that attractive targets were, in fact, found to be more attractive than non-attractive target ($M_{diff} = 2.53, t_{513} = 42.00, d = 2.05, p < .001$). Further, running separate t-tests for men and women revealed significant differences for both male ($M_{att} = 4.97, M_{unatt} = 2.14, t_{97} = 20.09, d = 2.02\ p < .001$) and female ($M_{att} = 4.11, M_{unatt} = 1.61, t_{415} = 37.61, , d = 2.07\ p < .001$) participants.

Table 1. Correlations among all study variables

	Mean (SD)	1	2	3	4
1. Threat photo ratings	4.20 (1.66)				
2. Non-threat photo ratings	1.68 (0.99)	.57***			
3. Pre-rating commitment	7.68 (1.57)	.04	.02		
4. Post-rating commitment	7.73 (1.52)	.00	-.02	.88***	
5. Relationship Autonomy	22.18 (9.61)	.06	.02	.64***	.64***

*** $p < .001$

Main Analyses

Hypothesis 1. Higher levels of commitment would predict greater derogation of threatening (i.e., attractive) photos.

Hypothesis 1a. To test whether commitment predicted lower ratings of attractive faces, I computed a multilevel model in which commitment was included as the predictor of the ratings of attractive opposite-sex photos. Results, which can be found in Table 2, revealed a non-significant association between commitment and ratings ($b = .03,\ SE = .046,\ CI\ [-.06,\ .12],\ p = .477$) indicating that commitment did not predict how people rated photos of attractive, opposite-sex people. Results also found that commitment did not predict the likelihood of the participant considering a given person to be a viable potential romantic partner ($OR = 1.068, CI\ [0.95, 1.21], p = .293$).

Hypothesis 1b. In order to test whether commitment differentially predicted the ratings of threatening and non-threatening photos, I computed a series of multilevel models in which all photos (i.e., attractive and unattractive) were included as outcomes. In Step 1, I included the main effects of threat condition and commitment as predictors. Threat condition was treated as a within-person variable (level 1) and commitment was treated as a between-person variable (level 2). In Step 2, I added the commitment x threat condition interaction as a predictor. Results of these analyses can be found in Table 3.

Regarding continuous ratings of attractiveness, results revealed that commitment was not associated with ratings ($b = .01,\ SE = .025,\ CI\ [-.04,\ .06],\ p = .704$) indicating that commitment did not predict how participants rated the attractiveness of the people in the photos. There was a significant effect of threat condition ($b = 2.23,\ SE = .057,\ CI\ [2.12, 2.34],\ p < .001$) such that attractive photos were rated as more attractive than unattractive photos. Further

there was a non-significant interaction ($b = .03,\ SE = .037,\ CI\ [-.04,\ .10],\ p = .427$), suggesting that the association between commitment and photo ratings did not differ as a function of attractiveness.

Regarding whether or not they would consider dating the person, results found a non-significant association with commitment ($OR = 1.072, CI[0.95, 1.22], p = .277$). Attractiveness was significantly associated with willingness to date the person such that participants were more likely to say yes to attractive faces ($OR = 69.35, CI\ [51.66, 93.09], p < .001$). However, there was no significant interaction between commitment and attractiveness ($OR = 1.00, CI[0.82, 1.21], p = .968$).

Hypothesis 2. Higher relationship autonomy would moderate the association between commitment and derogation, such that commitment was not as strongly related to derogation.

Hypothesis 2a. To test whether relationship autonomy moderated the association between commitment and ratings of attractive photos, I computed a series of multilevel models in which ratings of attractive faces were included as the outcome. In Step 1, the main effects of commitment and relationship autonomy were included as predictors. In Step 2, I added the commitment x relationship autonomy interaction as a predictor. Results of these analyses can be found in Table 2.

Regarding continuous ratings of attractiveness, results revealed non-significant associations with both commitment ($b = -.01,\ SE = .060,\ CI\ [-.13,\ .11],\ p = .887$) and relationship autonomy ($b = .01,\ SE = .010,\ CI\ [-.01,\ .03],\ p = .286$) indicating that neither commitment nor relationship autonomy predicted how people rated photos of attractive, opposite-sex people. The interaction between commitment and relationship autonomy was also non-significant ($b = .00,\ SE = .005,\ CI\ [-.01,\ .01],\ p = .908$), suggesting that the

association between commitment and ratings of attractive faces did not differ significantly as a function of relationship autonomy.

Regarding whether or not they would consider dating the person, results found non-significant associations with commitment ($OR = 1.10, CI[0.94, 1.29], p = .245$) and relationship autonomy ($OR = 0.99, CI[0.97, 1.02], p = .582$). Further, the interaction between commitment and relationship autonomy was non-significant ($OR = 1.00, CI[0.99, 1.01], p = .929$).

Hypothesis 2b. To test whether this differed for threatening and non-threatening photos, I computed a series of multilevel models in which all photos (i.e., attractive and unattractive) were included as outcomes. In Step 1, the main effects of threat condition, commitment, and relationship autonomy were included as predictors. In Step 2, two-way interactions between all variables were entered as predictors. In Step 3, I included the three-way interaction between threat condition, commitment, and relationship autonomy. Threat condition was treated as a within-person variable (level 1) whereas commitment and relationship autonomy were treated as between-person variables (level 2). Results of these models can be found in Table 3.

Regarding continuous ratings of attractiveness, there was a significant effect of threat condition ($b = 2.23,\ SE = .057,\ CI\ [2.12, 2.34],\ p < .001$) such that attractive photos were rated as more attractive than unattractive photos. Further, neither commitment ($b = .01,\ SE = .033,\ CI\ [-.06, .07],\ p = .804$) nor relationship autonomy ($b = .00,\ SE = .005,\ CI\ [-.01,\ .01],\ p = .946$) were associated with ratings of photos. There were no significant interactions between commitment and relationship autonomy ($b = .00,\ SE = .002,\ CI\ [-.01,\ .004],\ p = .739$), commitment and threat condition ($b = -.01,\ SE = .048,\ CI\ [-.11,\ .08],\ p = .801$), or relationship autonomy and threat condition ($b = .01,\ SE = .008,$

CI $[-.005,\ .03],\ p = .183$). Results also revealed a non-significant three-way interaction ($b = .001,\ SE = .004,\ CI$ $[-.01,\ .01],\ p = .716$).

Regarding yes/no decisions to date the people in the photos, neither commitment ($OR = 1.12, CI$ $[0.95, 1.31], p = .189$) nor relationship autonomy ($OR = 0.99, CI$ $[0.96, 1.02], p = .454$) were significant predictors. However, the attractiveness of the person mattered such that people were more likely to say yes to an attractive person ($OR = 69.39, CI$ $[51.69, 93.15], p < .001$). Further, commitment and relationship autonomy did not interact ($OR = 1.00, CI$ $[0.99, 1.01], p = .965$). Attractiveness did, however, interact with both commitment (marginally) ($OR = 0.79, CI$ $[0.60, 1.03], p = .080$) and relationship autonomy ($OR = 1.06, CI$ $[1.02, 1.10], p = .007$). Importantly, there was no three-way interaction between commitment, relationship autonomy, and attractiveness ($OR = 1.00, CI$ $[0.98, 1.02], p = .950$).

To better understand the nature of the significant two-way interactions, I computed simple slopes regarding the associations of commitment and relationship autonomy for attractive and unattractive conditions (Cohen, Cohen, Aiken, & West, 2003). Unexpectedly, threat condition moderated commitment such that commitment predicted higher likelihood of saying 'yes' if the pictures were unattractive ($OR = 1.40, CI$ $[1.03, 1.91], p = .034$) but did not predict likelihood of saying 'yes' if the pictures were attractive ($OR = 1.10, CI$ $[0.93, 1.31], p = .284$). Threat condition moderated relationship autonomy such that relationship autonomy predicted lower likelihood of saying 'yes' if the pictures were unattractive ($OR = 0.94, CI$ $[0.90, 0.99], p = .009$) but did not predict likelihood of saying 'yes' if the pictures were attractive ($OR = 0.99, CI$ $[0.97, 1.02], p = .640$).

Table 2. Multilevel Models Predicting Ratings of Attractive Faces (Hypotheses 1a and 2a) (Study 1)

		Continuous Attractiveness Ratings				Dichotomous Yes/No Decision		
		b	*SE*	*CI*	*p*	*OR*	*CI*	*p*
Hypothesis 1a								
	Commitment	.03	.046	-.06, .12	.477	1.068	0.95, 1.21	.293
Hypothesis 2a								
	Commitment	-.01	.060	-.13, .11	.887	1.10	0.94, 1.29	.245
	RA	.01	.010	-01, .03	.286	0.99	0.97, 1.02	.582
	Commitment x RA	.00	.005	-.01, .01	.908	1.00	0.99, 1.01	.929

Note. Significant and marginally significant findings are in bold. Relationship autonomy condition is denoted at 'RA'.

Table 3. Multilevel Models Predicting Ratings of All Faces (Hypotheses 1b and 2b) (Study 1)

		Continuous Attractiveness Ratings				Dichotomous Yes/No Decision		
		b	*SE*	*CI*	*p*	*OR*	*CI*	*p*
Hypothesis 1b								
	Commitment	.01	.025	-.04, .06	.704	1.07	0.95, 1.22	.277
	Threat	**2.23**	**.057**	**2.12, 2.34**	**<.001**	**69.35**	**51.66, 93.09**	**<.001**
	Commitment x Threat	.03	.037	-.04, .10	.427	1.00	0.82, 1.21	.968
Hypothesis 2b								
	Commitment	.01	.033	-.06, .07	.804	1.12	0.95, 1.31	.189
	RA	.00	.005	-.01, .01	.946	0.99	0.96, 1.02	.454
	Threat	**2.23**	**.057**	**2.12, 2.34**	**<.001**	**69.39**	**51.69, 93.15**	**<.001**
	Commitment x RA	.00	.002	-.01, .004	.739	1.00	0.99, 1.01	.965
	Commitment x Threat	-.01	.048	-.11, .08	.801	**0.79**	**.60, 1.03**	**.080**
	RA x Threat	.01	.008	-.005, .03	.183	**1.06**	**1.02, 1.10**	**.007**
	Commitment x RA x Threat	.001	.004	-.01, .01	.716	1.00	0.98, 1.02	.950

Note. Significant and marginally significant findings are in bold. Relationship autonomy condition is denoted at 'RA' and Threat Condition is denoted as 'Threat'.

Hypotheses 3 and 4. To test whether ratings of attractive faces were associated with change in commitment from pre- to post-ratings, and whether this was moderated by relationship autonomy, I first averaged individual's ratings of attractive faces such that each participant had one score for their ratings. I then computed a regression model in which post-rating commitment was residualized onto pre-rating commitment, creating a change score. In the first model, I included both participants' average rating of attractive faces and relationship autonomy as a predictor of residualized commitment. In Step 2, I added the relationship autonomy x ratings interaction.

Results for models in which I included the continuous ratings of attractiveness as a predictor can be found in Table 4. The main effect of relationship autonomy predicted increases in commitment ($b = .02,\ SE = .004,\ CI\ [.01,\ .03],\ p < .001$). Further, ratings of attractive faces marginally predicted decreases in commitment ($b = -.03,\ SE = .019,\ CI\ [-.07,\ .003],\ p = .075$). However, I did not find the anticipated interaction between relationship autonomy and ratings of faces ($b = .00,\ SE = .002,\ CI\ [-.004,\ .003],\ p = .875$), indicating that the association between ratings of attractive faces and change in commitment is not a function of relationship autonomy.

Table 4. Continuous Ratings of Attractiveness Predicting Post-Rating Commitment (Hypotheses 3 and 4) (Study 1)

	Post-Rating Commitment			
	b	*SE*	*CI*	*p*
Pre-Commitment	**.77**	**.026**	**.72, .82**	**<.001**
RA	**.02**	**.004**	**.01, .03**	**<.001**
Ratings	**-.03**	**.19**	**-.07, .003**	**.075**
RA x Ratings	.00	.002	-.004, .003	.875

Note. Significant and marginally significant findings are in bold. Relationship autonomy condition is denoted at 'RA'.

Results for models in which I included the proportion of 'yes' responses to dating attractive faces as a predictor can be found in Table 5. Relationship autonomy continued to predict increases in commitment from pre- to post-ratings ($b = .02,\ SE = .004,\ CI\ [.01,\ .03],\ p < .001$). The proportion of 'yes' responses, however, did not reach significance in predicting changes in commitment ($b = .-.14,\ SE = .109,\ CI\ [-.36,\ .07],\ p = .195$). Further, there was no interaction between relationship autonomy and the proportion of people participants said they would date ($b = .00,\ SE = .012,\ CI\ [-.03,\ .02],\ p = .959$).

Table 5. Proportion of 'Yes' Responses Predicting Post-Rating Commitment (Hypotheses 3 and 4) (Study 1)

	Post-Rating Commitment			
	b	*SE*	*CI*	*p*
Pre-Commitment	**.77**	**.027**	**.72, .83**	**<.001**
RA	**.03**	**.004**	**.01, .03**	**<.001**
Proportion of 'Yes' Responses	-.14	.109	-.36, .07	.195
RA x Proportion of 'Yes' Responses	.00	.012	-.03, .02	.959

Note. Significant and marginally significant findings are in bold. Relationship autonomy condition is denoted at 'RA'.

Ancillary Analyses: Gender and Derogation. I next conducted a series of exploratory analyses examining potential effects of gender, as ratings of attractiveness (and their effect on commitment) may be different for men and women. The plan of analysis followed the same plan as the main analyses, except gender main effects and interactions with gender were added to the models. Because derogation was only expected for attractive, threatening photos I only consider ratings of attractive photos in these particular analyses. All observations in which the target was unattractive and thus, non-threatening, were excluded from these analyses.

Hypothesis 1. To test whether men or women differ in the degree to which they derogate attractive alternatives, I computed a series of multilevel models. In Step 1, both the main effects of commitment and gender were simultaneously included as predictors of the ratings of attractive opposite-sex faces. In Step 2, I added the interaction between gender and relationship commitment.

Regarding continuous ratings of attractiveness, and as in the main analyses, commitment was not associated with ratings of attractive opposite-sex faces ($b = .05,\ SE = .047,\ CI\ [-.04,\ .14],\ p = .295$). Gender did significantly predict ratings of attractive opposite-sex faces such that females rated their set of faces as less attractive than males rated their set of faces ($b = -.53,\ SE = .186,\ CI\ [-89, -.16],\ p = .005$). Further, the interaction between gender and commitment was not significant ($b = -.02,\ SE = .104,\ CI\ [-.23,\ .18],\ p = .835$) indicating that the effect of commitment on ratings of attractive opposite-sex faces was not different for men and women.

Regarding the likelihood of a participant to say they would date a given person, commitment was not associated with ratings of attractive opposite-sex faces ($OR = 1.11,\ CI\ [0.98,\ 1.25],\ p = .101$). Gender did significantly predict ratings of attractive opposite-sex faces such that females were less likely to say they would want to date a given person ($OR = 0.42,\ CI\ [0.26,\ 0.68],\ p < .001$). Further, the interaction between gender and commitment was not significant ($OR = 1.01,\ CI\ [0.77,\ 1.31],\ p = .972$) indicating that the effect of commitment on ratings of attractive opposite-sex faces was not different for men and women.

Hypothesis 2. Next, to determine if the effect of relationship autonomy on derogation is different for men and women, I computed a series of multilevel models in which attractive faces were included as the outcome. In Step 1, the main effects of commitment, relationship autonomy, and gender were simultaneously included as predictors. In Step 2, I added three two-way interactions as predictors: commitment x relationship autonomy, commitment x gender, and relationship autonomy x gender. Finally, in Step 3, I added the three-way interaction between commitment, relationship autonomy, and gender,

As in the main analyses that included the continuous rating of attractiveness as the outcome, results revealed no association between commitment and ratings of attractive opposite-sex faces ($b = -.01,\ SE = .060,\ CI\ [-.13,\ .11],\ p = .893$) or between relationship autonomy and ratings of attractive opposite-sex faces ($b = .01,\ SE = .010,\ CI\ [-.005, .03],\ p = .132$). There was a significant effect of gender such that females rated their set of photos as less attractive than males rated their set of photos ($b = -.58,\ SE = .187,\ CI\ [-.95,\ -.22],\ p = .002$). The interaction between commitment and relationship autonomy also did not reach significance ($b = .00,\ SE = .005,\ CI\ [-.01, .01],\ p = .790$). Further, gender did not interact with either commitment ($b = .06\ SE = .143,\ CI\ [-.22, .34],\ p = .691$) or relationship autonomy ($b = -.02,\ SE = .024,\ CI\ [-.07,\ .02],\ p = .332$) to predict ratings of attractive opposite-sex faces. Finally, the three-way interaction between gender, commitment, and relationship autonomy did not reach significance ($b = .00,\ SE = .011,\ CI\ [-.02, .03],\ p = .667$).

Regarding analyses that included the likelihood of 'yes' responses as the outcome, there was no main effect of either commitment ($OR = 1.11,\ CI\ [0.95, 1.30],\ p = .184$) or relationship autonomy ($OR = 1.00,\ CI\ [0.97, 1.03],\ p = .936$). There was a significant effect of gender such that females were less likely to say yes to a given person ($OR = 0.42,\ CI\ [0.26, 0.68],\ p < .001$). However, gender did not interact with either commitment ($OR = 1.05,\ CI\ [0.73, 1.52],\ p = .781$) or relationship autonomy ($OR = 0.99,\ CI\ [0.93, 1.05],\ p = .737$), nor did commitment interact with relationship autonomy ($OR = 1.00,\ CI\ [0.99, 1.01],\ p = .896$). Finally, there was no significant three-way interaction between gender, commitment, and relationship autonomy ($OR = 1.00,\ CI\ [0.97, 1.03],\ p = .996$).

Hypotheses 3 and 4. To test whether gender moderated the effect of rating attractive faces on changes in commitment from pre- to post-ratings, I first averaged individual's ratings of attractive faces such that each participant had one score for their ratings. I then computed a series of hierarchical regression models in which post-rating commitment was residualized onto pre-rating commitment, creating a change score. In Step 1, I simultaneously included the main effects of relationship autonomy, participants' average rating, and gender. In Step 2, I added the three two-way interactions: relationship autonomy x ratings, relationship autonomy x gender, and ratings x gender. Finally, in Step 3, I included the three-way interaction between relationship autonomy, ratings, and gender.

When including continuous ratings of attractiveness as a predictor, and as in the main analyses, there was a significant main effect of relationship autonomy ($b = .02,\ SE = .004,\ CI\ [.01, .03],\ p < .001$) and a marginal main effect of participants' ratings ($b = -.04,\ SE = .019,\ CI\ [-.07, .002],\ p = .066$). Gender did not significantly predict change in commitment ($b = -.04,\ SE = .083,\ CI\ [-.21,\ .12],\ p = .582$). Additionally, the relationship autonomy x ratings interactions remained non-significant ($b = .00,\ SE = .002,\ CI\ [-.004,\ .003],\ p = .750$). Gender did not moderate the effect of relationship autonomy ($b = -.01,\ SE = .008\ CI\ [-.03,\ .01],\ p = .195$) or ratings ($b = .06, SE = .050,\ CI\ [-.04,\ .16],\ p = .260$). Finally, the three-way interaction between gender, relationship autonomy, and ratings of attractiveness did not reach significance ($b = -.01,\ SE = .005,\ CI\ [-.01,\ .004],\ p = .273$).

For analyses in which the proportion of 'yes' responses was included as a predictor, the main effect of relationship autonomy was significant ($b = .02,\ SE = .004,\ CI\ [.01,\ .03],\ p < .001$). However, neither the proportion of 'yes' responses ($b = -.15,\ SE = .111,\ CI\ [.-.37,\ .07],\ p = .598$) nor gender ($b = -.04,\ SE = .084,\ CI\ [-.21,\ .12],\ p - .598$)

predicted changes in commitment. There were also no interactions between gender and relationship autonomy ($b = -.01,\ SE = .008,\ CI\ [-.02,\ .01],\ p = .252$), gender and proportion of 'yes' responses ($b = .27,\ SE = .277,\ CI\ [-.27,\ .82],\ p = .325$), or relationship autonomy and the proportion of 'yes' responses ($b = -.004,\ SE = .013,\ CI\ [-.03,\ .02],\ p = .760$).

Ancillary Analyses: Race and Derogation. Because of the racially/ethnically diverse nature of both the sample and the people being rated in the photos, it is important to determine if the lack of effects were driven by racial considerations. For instance, it is possible that participants were less willing to date someone of another race, and thus, those pictures were not considered threatening. In order to isolate race effects, I created a dataset that only included observations in which the participant and target in the photo were of the same race. Further, because participants rated different pictures (depending on their race) which limits the number of participants who will have observations under these criteria, and because derogation is only expected for attractive, threatening photos, these analyses only consider ratings of attractive photos. All observations in which the target was unattractive and thus, non-threatening, were excluded from these data. In total, 151 participants rated at least 1 attractive photo of an attractive target who was of the same race. The plan of analysis followed the same approach as the main analyses that examined only ratings of attractive faces.

Hypothesis 1. Higher levels of commitment would predict greater derogation of threatening (i.e., attractive) photos.

I first computed a multilevel model in which commitment was included as the predictor of the ratings of attractive opposite-sex photos. Results revealed a non-significant effect of commitment ($b = -.002,\ SE = .071,\ CI\ [-.14,\ .14],\ p = .979$) indicating that commitment

did not predict how people rated photos of attractive, opposite-sex people of the same race. I next computed a logistic multilevel model in which commitment was included as the predictor of the likelihood of the participant saying they would date the person in the photo. Again, commitment did not predict a participant's likelihood of saying they would date the person in the photo ($OR = 1.03, CI\ [0.84, 1.26], p = .792$).

Hypothesis 2. Higher relationship autonomy would moderate the association between commitment and derogation, such that commitment is not as strongly related to derogation.

To test whether relationship autonomy moderated the association between commitment and ratings of attractive photos, I computed a series of multilevel models in which ratings of attractive faces were included as the outcome. In Step 1, the main effects of commitment and relationship autonomy were included as predictors. In Step 2, I added the commitment x relationship autonomy interaction as a predictor.

Regarding continuous ratings of attractiveness, results revealed non-significant main effects of commitment ($b = .03,\ SE = .100,\ CI\ [-.17,\ .22],\ p = .798$) and relationship autonomy ($b = -.01,\ SE = .017,\ CI\ [-.04,\ .03],\ p = .686$) indicating that neither commitment nor relationship autonomy predicted how people rated photos of attractive, opposite-sex people of the same race. Results revealed a non-significant interaction between commitment and relationship autonomy ($b = -002,\ SE = .007,\ CI\ [-.02, .01],\ p = .799$), suggesting that the association between commitment and ratings of attractive faces of the same race did not differ as a function of relationship autonomy.

Regarding the likelihood of saying they would date the person in the photo, neither commitment ($OR = 1.15, CI\ [0.87, 1.53], p = .330$) nor relationship autonomy ($OR = 0.97, CI\ [0.93, 1.02], p = .258$) were significant predictors. Nor did the interaction between

commitment and relationship autonomy reach significance ($OR = 1.00, CI\ [0.98, 1.02], p = .929$).

Hypotheses 3 and 4. To test whether rating attractive faces of the same race was associated with change in commitment from pre- to post-ratings and whether this was moderated by relationship autonomy, I averaged individual's ratings of attractive faces such that each participant had one score for their ratings. I then computed hierarchical regression models in which post-rating commitment was residualized onto pre-rating commitment, creating a change score. In Step 1, I also included both relationship autonomy and participants' average rating of attractive faces as predictors of residualized commitment. In Step 2, I added the relationship autonomy x ratings interaction.

Regarding continuous ratings of attractiveness, the main effect of relationship autonomy was significant ($b = .03,\ SE = .007,\ CI\ [.01,\ .04],\ p < .001$). However, unlike in the primary analyses, ratings of attractive faces of the same race did not predicted decreases in commitment ($b = -.02,\ SE = .027,\ CI\ [-.08,\ .03],\ p = .384$). Finally, the interaction term was also not significant ($b = .001,\ SE = .003,\ CI\ [-.004,\ .01],\ p = .604$), indicating that the association between ratings of attractive faces of the same race and changes in commitment is not a function of relationship autonomy.

Regarding the proportion of 'yes' responses, relationship autonomy significantly predicted increases in commitment ($b = .03,\ SE = .007,\ CI\ [.01,\ .04],\ p < .001$). However, the proportion of 'yes' responses was not significantly associated with change in commitment ($b = -.04, SE = .131, CI\ [-.30, .22], p = .780$). Finally, the interaction between relationship autonomy and the proportion of 'yes' responses was not significant ($b = .00, SE = .014, CI\ [-.03, .03], p = .985$).

Discussion

Study 1 found little support for the hypothesized associations. Unlike in prior research (e.g., Johnson & Rusult, 1989; Miller, 1997; Simpson et al., 1990) relationship commitment did not predict derogation of potential alternative partners (Hypothesis 1). Specifically, commitment did not predict lower ratings of attractive opposite-sex faces or a lower likelihood of being willing to date the person (Hypothesis 1a). Further, the main effect of commitment on ratings did not vary across attractive and unattractive opposite-sex faces (Hypothesis 1b). Relationship autonomy was also not found to predict differences in ratings of attractive opposite-sex faces.

More importantly, relationship autonomy did not moderate the association between commitment and perceptions of opposite-sex faces (Hypothesis 2a) or the difference in continuous ratings of attractive versus unattractive opposite-sex faces (Hypothesis 2b). However, both commitment and relationship autonomy interacted with threat level to predict yes/no decisions to date the person in the picture, albeit in unexpected ways. That is, whereas the traditional view of derogation would suggest that commitment should be related to lower ratings for threatening, but not non-threatening targets, the present results found that commitment only predicted higher likelihood of saying ‘yes’ if the target was unattractive. A similar finding was found for relationship autonomy, such that it was related to lower likelihood of saying ‘yes’ to unattractive targets, but not attractive targets.

Finally, there was some evidence that ratings of attractive opposite-sex faces predicted decreases in commitment from pre- to post-ratings (Hypothesis 3), as I found that higher continuous ratings of attractive faces marginally predicted decreases in commitment. However, this same association did not emerge for the proportion of ‘yes’ responses gave to the same set of faces. As such, based on these results, it is unclear whether ratings of attractive others plays a

role in commitment. Further, there was no evidence that relationship autonomy moderated any possible effect of ratings (Hypothesis 4).

Importantly, the lack of observed effects does not appear to be due to either gender or race. Although female participants tended to rate their set of faces as less attractive than did male participants, gender did not moderate the associations between either commitment or relationship autonomy with ratings. Further, it was plausible that some participants would not consider people of different races to be viable dating partners and thus would not consider people of different races to be threats to their own commitment, even if the target was attractive. However, the observed pattern of results remains largely unchanged when limiting the data to observations in which the race of the participant matched the race of the person in the picture.

There are several factors that are important to note when interpreting these results. The first is that there is a possible ceiling effect of commitment, as the average rating is rather high (7.68 out of 9.00 for commitment reported before the attractiveness ratings) with a rather high standard deviation (1.57). This indicates that many participants reported the highest, or close to the highest, levels of commitment which may lower my ability to find any effects that may exist. The second is that, although the attractive faces were rated as more attractive than the unattractive faces, the ratings were still very low, especially compared to prior studies on derogation in which the attractive photos have higher average ratings (i.e., ~7.5 of out of 9 in Johnson & Rusbult, 1989; ~14 out of 19 in Miller, 1997; ~5.5 out of 7 in Petit & Ford, 2015). In fact, the most attractive photo averaged a 6.84 out 10 and several attractive photos were rated as below the mid-point of the scale. Indeed, the average rating of attractive faces (across both genders) was itself below the midpoint (4.20). Thus, it is possible that participants simply did not find the attractive photos to be threatening enough to derogate, and thus, no pattern was

observed. In other words, if participants did not find the attractive faces to be especially attractive, there is no need to derogate them by downplaying their attractiveness. As such, in Studies 2 and 3, we changed the stimuli from pictures of "college students" to pictures of models taken from magazines that have successfully elicited derogation responses from participants in previous research (Petit & Ford, 2015) in order to create a stronger threat to participants' relationship commitment.

Study 2

Study 2 was designed to expand upon Study 1 in several ways. Most notably, Study 2 tested the causal role of relationship autonomy by employing an experimental design in which levels of relationship autonomy were manipulated via a writing task. In this writing task, participants were asked to copy a number of sentences that were either (a) statements that reflected more intrinsic and integrated reasons for being in their relationship or (b) statements that reflected extrinsic and introjected reasons for being in their relationship. Additionally, because the ratings of attractive photos were so low in Study 1 (mean rating of 4.20 out of 10), it is possible that I did not obtain a pattern of derogation because none of the faces were perceived as threats to participants' commitment. As such, the present study used a different set of pictures that were taken from magazine advertisements and have successfully elicited derogation responses in prior work (Petit & Ford, 2015). In this task, participants rate both attractive male and female models, with the threat condition being comprised of the opposite-sex models and the no-threat condition being comprised of the same-sex models. Importantly, because the non-threatening condition was comprised of same-sex targets and all participants were heterosexual, it makes little sense to ask how willing participants would be to date someone of the same-sex. As such, the dichotomous comparison across threat conditions was not included in Study 2.

In Study 2, I expected to find that higher commitment was associated with lower ratings of threatening (opposite-sex) models (Hypothesis 1a), but not for non-threatening (same-sex) models (Hypothesis 1b). Further, I expected relationship autonomy to moderate the association between commitment and ratings of threatening models such that people who were induced to feel high relationship autonomy would derogate threatening models less than people induced to feel low relationship autonomy (Hypothesis 2a). Again, I expected no such effect would emerge for non-threatening models (Hypothesis 2b). Finally, higher ratings of attractive models would be associated with decreases in commitment (Hypothesis 3), but relationship autonomy would moderate this association (Hypothesis 4).

Method

Participants. Participants were 212 undergraduates recruited from the SONA pool at the University of Houston. All participants were currently involved in an exclusive romantic relationship of at least three months, to ensure they had sufficient experience with their romantic partner. Nine participants were dropped because they did not correctly answer at least two out of three attention check questions (e.g., "pick 'strongly agree'"). Another 18 participants were dropped because they indicated they were not heterosexual, and thus, the threatening nature of the stimuli was less clear. In total, 185 participants were included in the present analyses, of whom 142 were female (77%) and 43 were male (23%). The average age of the participants was 22.05 years old (*SD* = 5.01) and the average duration of the relationship was 31.53 months (*SD* = 37.14). Further, 5% of participants were casually dating, 70% were exclusively/seriously dating, 16% were engaged/nearly engaged, and 9% were married. The sample was ethnically diverse, with 34% Latino/a, 24% Caucasian non-Hispanic, 21% Asian/Pacific Islander, 14% African American, and 7% other.

Procedure. Participants signed up for the study online where they signed up for an in-lab session, which they attended in groups up to four. When they arrived for the lab session, a research assistant greeted them and sat the participants down at separate computers that did not face each other. The research assistant told participants the ostensible reason for the study, which was that we were interested in the way that various relationship and personality factors influence the types of mistakes people make when typing. The research assistant explained that they would be asked to copy a series of sentences as quickly as possible, without using copy/paste and without correcting any mistakes. Participants were randomly assigned to copy sentences that either (a) reflected intrinsic and integrated (high autonomy condition) reasons for being in their relationship or (b) reflected extrinsic and introjected (low autonomy condition) reasons for being in their relationship. The research assistant also told participants that at the end of the survey there was an unrelated pilot study in which we wanted to gauge people's reactions to a series of advertisements. Participants completed the survey at the computer, first completing a series of questionnaires, then the sentence copying task. Immediately following the sentence copying task, participants were shown a series of photos taken from magazine advertisements, concluded by reporting their current commitment to their relationship. Finally, participants were debriefed and informed about the purpose of the study.

Measures.

Commitment was assessed using the same measure as in Study 1 (Rusbult et al., 1998) (pre: $\alpha = .89$; post: $\alpha = .90$).

Relationship Autonomy Writing Task (Appendix D). Participants were randomly presented with one of two conditions—high or low relationship autonomy—which were designed to reflect different aspects of the motivation continuum (for review, see Deci & Ryan,

2000). Participants in both conditions were presented with 5 sentences (3 motivation priming sentences, 2 filler sentences), and asked to retype each sentence 4 times. All participants were given the following instructions, "Below are several statements. We are interested in the way people process written statements. One of the most telling ways to identify processing differences is to assess the spontaneous errors people make when copying different types of statements. As such, you will be shown one statement at a time. Please write each statement 4 times in the lines below as quickly as possible. Do not worry about or fix any errors you make."

In the high relationship autonomy condition, participants retyped 3 sentences that reflected intrinsic and integrated reasons for being in their relationship (i.e., "I love the many fun and exciting times I share with my partner," "My relationship with my partner allows me to improve myself," "The deep and meaningful discussions I have with my partner are very satisfying."). In the low relationship autonomy condition, participants retyped 3 sentences that reflected extrinsic and introjected reasons for being in their relationship (i.e., "I would feel guilty if I separated from my partner," "Others are proud of my relationship and I don't want to disappoint them," "My partner wouldn't be able to cope with a separation."). All participants retyped the same 2 filler questions (i.e., "I feel that I have a number of good qualities," "I see myself as reserved, quiet).

Evaluation of Alternative Partners (Appendix E). Participants rated 18 pictures taken from advertisements that included a mixture of threatening and non-threatening photos. Six photos were of attractive opposite-sex individuals (threat), six were of attractive same-sex individuals (non-threat), and six were of commercial products (filler). Participants were asked to rate the person in each photo on (1) how physically attractive they find the person, (2) how much sex appeal the person has, and (3) how interested they would be in meeting the person.

Participants rated the products according to (1) how appealing they find the product (2) how interested they would be in using/purchasing the product, and (3) whether they would consider buying the product. Physical attractiveness, sex appeal, and desire to meet were all assessed on a scale from 1 (not at all) to 10 (very much) and were averaged to create a composite attractiveness score ($\alpha = .83$).

Results

Plan of Analysis

Attractiveness was assessed as the average of the three questions (attractiveness, sexual appeal, and desire to meet) across each level of threat. Relationship autonomy was dummy-coded (0 = low, 1 = high). Threat condition was also dummy-coded (0 = same-sex, 1 = opposite-sex). Commitment, a continuous predictor, was grand-mean centered prior to all analyses. Because participants made multiple ratings of attractiveness, analyses were conducted using multilevel modeling (SAS 9.4 PROC MIXED) to account for the non-independence within participants' ratings. Commitment and relationship autonomy were treated as between-person (level 2) variables, whereas threat condition was treated as a within-person (level 1) variable.

Preliminary analyses

Means, standard deviations, and correlations between all between-person variables are reported in Table 6. Attractiveness ratings are reported separately by condition (threatening v. not-threatening) and were computed by averaging ratings within participants. Ratings of threat and non-threat models were positively associated, meaning that participants who gave higher ratings to opposite-sex models also tended to do so for same-sex models. Ratings of models were unrelated to either measure of commitment or relationship autonomy. Commitment assess before the attractiveness ratings was not significantly correlated with relationship autonomy condition,

suggesting the random assignment was successful. Further, relationship autonomy condition was not correlated with post-ratings of commitment. A dependent samples t-test revealed that opposite-sex (threatening) targets were found to be more attractive than same-sex (non-threatening) targets ($M_{diff} = 0.55, t_{185} = 4.03, d = .294,\ p < .001$). Further, running separate t-tests for men and women revealed significant differences for male ($M_{diff} = 2.26,\ t_{42} = 6.75, d = 1.03\ p < .001$) but not female ($M_{diff} = 0.04, t_{141} = .31,\ d = .029, p = .759$) participants.

Table 6. Correlations among all study variables

		Mean (SD)	1	2	3	4
1.	Threat photo ratings	5.73 (1.66)				
2.	Non-threat photo ratings	5.18 (1.70)	.38***			
3.	Pre-rating commitment	7.77 (1.42)	-.12	.01		
4.	Post-rating commitment	7.73 (1.46)	-.07	.02	.90***	
5.	Autonomy Condition	.51 (.50)	-.17*	.-.22*	.04	.03

* $p < .05$, *** $p < .001$

Main Analyses

Hypothesis 1. Higher levels of commitment would predict greater derogation of threatening (i.e., opposite-sex) models.

Hypothesis 1a. To test whether commitment predicted lower ratings of opposite-sex models, I computed a multilevel model in which commitment was included as the predictor of the ratings of opposite-sex models. Results, which can be found in Table 7, revealed a marginally negative association between commitment and ratings ($b = -.14,\ SE = .083,\ CI\ [-.30,\ .03],\ p = .083$) indicating that higher levels of commitment predicted lower ratings of opposite-sex models relative to people who are less committed.

Hypothesis 1b. In order to test whether commitment differentially predicted the ratings of threatening and non-threatening models, I computed a series of multilevel models in which all photos (i.e., opposite- and same-sex) were included as outcomes. Results of these models can be found in Table 8. In Step 1, I included the main effects of threat condition and commitment as predictors. Threat condition was treated as a within-person variable (level 1) and commitment was treated as a between-person variable (level 2). Results revealed a non-significant main effect of commitment ($b = -.10,\ SE = .069,\ CI\ [-.24,\ .03],\ p = .141$) indicating that commitment did not predict how people rated models overall. There was a significant effect of threat condition ($b = 0.95,\ SE = .125,\ CI\ [0.70, 1.19],\ p < .001$) such that opposite-sex models were rated as more attractive than were same-sex models.

In Step 2, I added the commitment x threat condition interaction as a predictor. Results revealed a non-significant interaction ($b = -.11\ SE = .088,\ CI\ [-.28,\ .07],\ p = .229$), suggesting that the association between commitment and photo ratings did not differ significantly as a function of threat condition.

Hypothesis 2. Higher relationship autonomy (as opposed to low in relationship autonomy) would moderate the association between commitment and derogation, such that commitment is not as strongly related to derogation.

Hypothesis 2a. To test whether relationship autonomy moderated the association between commitment and ratings of threatening models, I computed a series of multilevel models in which ratings of opposite-sex models were included as the outcome, the results of which can be found in Table 7. In Step 1, the main effects of commitment and relationship autonomy condition were included as predictors. Results revealed a marginally negative association between commitment and ratings ($b = -.14,\ SE = .082,\ CI\ [-.30,\ .03],\ p = .098$) indicating participants who were higher in commitment (as opposed to lower) rated opposite-sex models as less attractive. Further, there was a negative effect of relationship autonomy condition on ratings ($b = -.50,\ SE = .23,\ CI\ [-.96,\ .-.04],\ p = .033$) such that people primed to be high in relationship autonomy rated opposite-sex models as less attractive than those primed with low relationship autonomy.

In Step 2, I added the commitment x relationship autonomy interaction which was non-significant ($b = .09,\ SE = .165,\ CI\ [-.24,\ .42],\ p = .587$), suggesting that the association between commitment and ratings did not differ as a function of relationship autonomy.

Hypothesis 2b. To test whether this differed for threatening and non-threatening photos, I computed a series of multilevel models in which ratings of all models (i.e., attractive and unattractive) were included as the outcome. Results from these models can be found in Table 8. In Step 1, the main effects of threat condition, commitment, and relationship autonomy were included as predictors. Threat condition was treated as a within-person variable (level 1) whereas commitment and relationship autonomy were treated as between-person variables (level 2). There was a significant effect of threat condition ($b = 0.93,\ SE = .125,\ CI\ [0.68,\ 1.18],\ p < .001$) such that opposite-sex models were rated as more attractive than same-sex models. There was no significant association with commitment ($b = -.08,\ SE = .067,\ CI\ [-.21,\ .05],\ p =$

.226). There was a significant effect relationship autonomy condition ($b = -0.66,\ SE = .192,\ CI\ [-1.04, -0.28],\ p < .001$) such that participants primed with high relationship autonomy rated models as less attractive than did participants primed with low relationship autonomy.

In Step 2, two-way interactions between all variables were entered as predictors. There were no significant interactions between commitment and relationship autonomy ($b = -.10,\ SE = .135,\ CI\ [-.37,\ .16],\ p = .449$), commitment and threat condition ($b = -.12,\ SE = .087,\ CI\ [-.29,\ .06],\ p = .188$), or relationship autonomy and threat condition ($b = .34,\ SE = .249,\ CI\ [-.15,\ .83],\ p = .178$).

In Step 3, I included a three-way interaction between threat condition, commitment, and relationship autonomy. Results revealed a marginally significant interaction ($b = .29,\ SE = .174,\ CI\ [-.06,\ .63],\ p = .100$).

Table 7. Multilevel Models Predicting Ratings of Opposite-Sex Models (Hypotheses 1a and 2a) (Study 2)

		Continuous Attractiveness Ratings			
		b	*SE*	*CI*	*p*
Hypothesis 1a					
	Commitment	**-.14**	**.083**	**-.30, .03**	**.083**
Hypothesis 2a					
	Commitment	**-.14**	**.082**	**-.30, .03**	**.098**
	RA	**-.50**	**.23**	**-.96, -.04**	**.033**
	Commitment x RA	.09	.165	-.24, .42	.587

Note. Significant and marginally significant findings are in bold. Relationship autonomy condition is denoted at 'RA'.

Table 8. Multilevel Models Predicting Ratings of All Models (Hypotheses 1b and 2b) (Study 2)

		Continuous Attractiveness Ratings			
		b	*SE*	*CI*	*p*
Hypothesis 1b					
	Commitment	-.10	.069	-.24, .03	.141
	Threat	**.95**	**.125**	**0.70, 1.19**	**<.001**
	Commitment x Threat	-.11	.088	-.28, .07	.229
Hypothesis 2b					
	Commitment	-.08	.067	-.21, .05	.226
	RA	**-.66**	**.192**	**-1.04, -0.28**	**<.001**
	Threat	**.93**	**.125**	**0.68, 1.18**	**<.001**
	Commitment x RA	-.10	.135	-.37, .16	.449
	Commitment x Threat	-.12	.087	-.29, .06	.188
	RA x Threat	.34	.249	-.15, .83	.178
	Commitment x RA x Threat	**.29**	**.174**	**-.06, .63**	**.100**

Note. Significant and marginally significant findings are in bold. Relationship autonomy condition is denoted at 'RA' and Threat Condition is denoted as 'Threat'.

To better understand the nature of this three-way interaction, I computed simple slopes (Cohen et al., 2003) to examine whether the two-way interaction between commitment and threat condition was significant for participants primed to be high in relationship autonomy versus participants primed to be low in relationship autonomy (See Figure 1). According to the

hypothesized model, I expected that relationship commitment and threat condition would only interact for people in the low autonomy condition. Indeed, the two-way interaction between commitment and threat condition was significant for those primed with low relationship autonomy ($b = -.25, SE = .119, CI\ [-.49, -.02], p = .037$) but not for those primed with high relationship autonomy ($b = .04, SE = .127, CI\ [-.21, .29], p = .765$). Further, breaking down the significant two-way interaction (commitment x threat condition) at low relationship autonomy, commitment did not significantly predict ratings of either opposite-sex ($b = -.17,\ SE = .112,\ CI\ [-.39,\ .05],\ p = .135$) or same-sex ($b = .08,\ SE = .109,\ CI\ [-.13,\ .30],\ p = .447$) models. However, despite the lack of significance, it is worth noting that the sign of the association between commitment and ratings was negative (and trending) for opposite-sex models but positive for same-sex models. As such, these analyses provide some support for the predicted model such that (1) the interaction between commitment and threat-condition was only significant for people primed with low relationship autonomy and (2) among those low in relationship autonomy, commitment was more negatively related to ratings of opposite-sex (threatening) than same-sex (non-threatening) models.

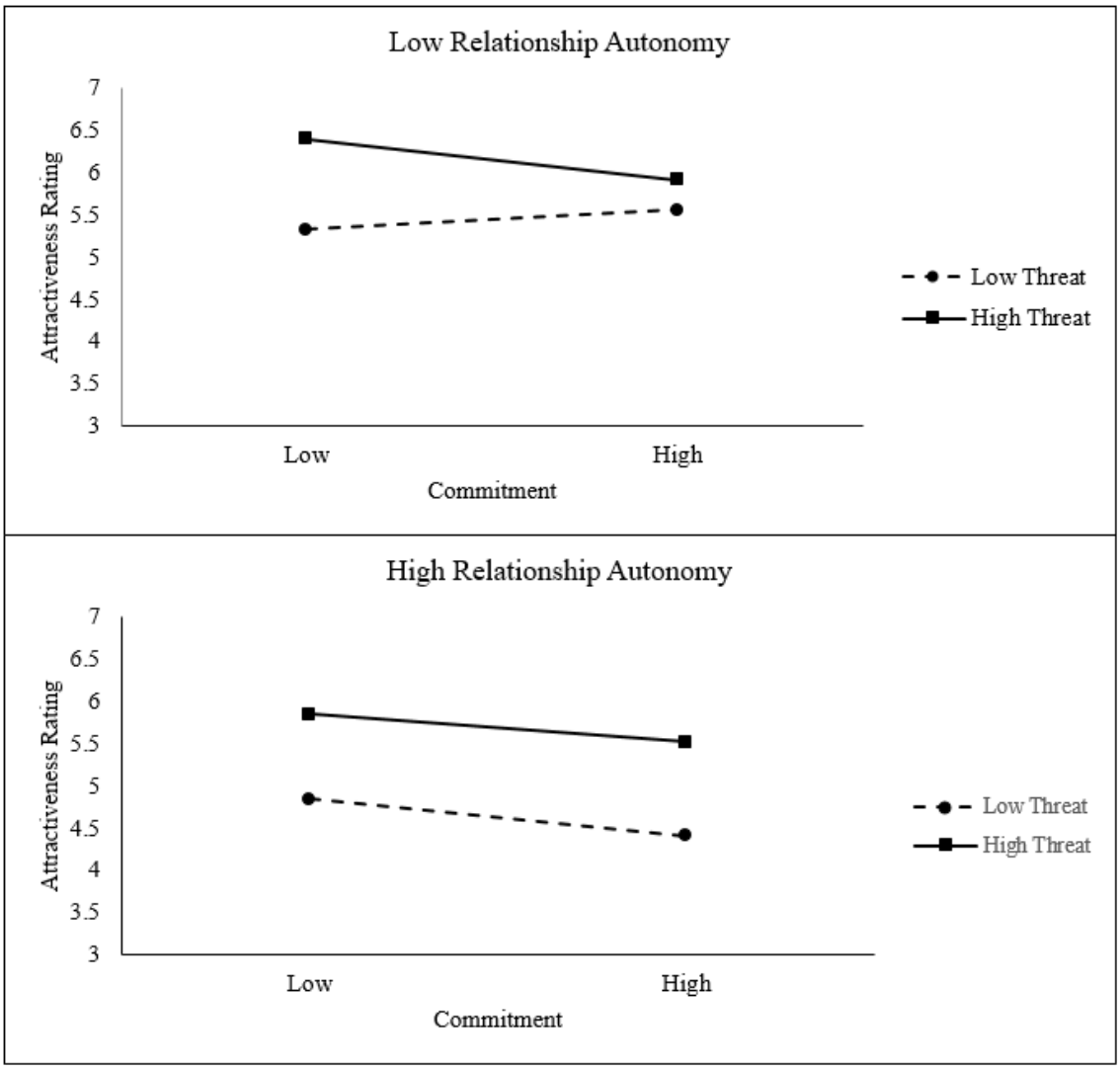

Figure 1. Three-way interaction between commitment, threat condition, and relationship autonomy condition (Study 2).

Hypotheses 3 and 4. To test whether rating opposite-sex models was associated with change in commitment from pre- to post-ratings, I averaged individual's ratings of opposite-sex models such that each participant had one score for their ratings. I then computed hierarchical regression models in which post-rating commitment was residualized onto pre-rating commitment, creating a change score. Results of these models can be found in Table 9. In Step 1,

I included both the relationship autonomy condition and the participants' average rating of opposite-sex models as predictors of residualized commitment. Results found that the main effect of relationship autonomy was a non-significant predictor of change in commitment ($b = .01,\ SE = .094,\ CI\ [-.18,\ .19],\ p = .945$). Further, ratings of opposite-sex models did not predict any change in commitment from pre- to post-ratings ($b = .03,\ SE = .029,\ CI\ [-.03,\ .09],\ p = .313$). In Step 2, I added the relationship autonomy x ratings interaction, which was not significant ($b = -.04,\ SE = .057,\ CI\ [-.15,\ .07],\ p = .489$), indicating that the association between ratings of attractive faces and changes in commitment is not a function of relationship autonomy.

Table 9. Continuous Ratings of Attractiveness Predicting Post-Rating Commitment (Hypotheses 3 and 4) (Study 2)

	Post-Rating Commitment			
	b	*SE*	*CI*	*p*
Pre-Commitment	**.93**	**.033**	**.86, .99**	**<.001**
RA	.23	.340	-.44, .90	.494
Ratings	.05	.040	-.03, .13	.230
RA x Ratings	-.04	.057	-.15, .07	.489

Note. Significant and marginally significant findings are in bold. Relationship autonomy condition is denoted at 'RA'.

Ancillary Analyses: Gender and Derogation. Next, I conducted exploratory analyses that examined the potential effects of gender on derogation. The plan of analysis followed the same plan as the main analyses, except gender and interactions with gender were added to the previous models. Because derogation was only expected for opposite-sex models I only

considered ratings of opposite-sex photos in these particular analyses. All observations in which the target was same-sex and thus, non-threatening, were not included in these analyses.

Hypothesis 1. To test whether men and women differed in the degree to which they derogate attractive alternatives, I computed a series of multilevel models. In Step 1, both the main effects of commitment and gender were simultaneously included as predictors of the ratings of opposite-sex models. Commitment marginally predicted lower ratings of opposite-sex models ($b = -.15,\ SE = .083,\ CI\ [-.31,\ .016],\ p = .076$). Gender was also related to ratings of opposite-sex models such that females rated male models as less attractive than males rated female models ($b = -.92,\ SE = .307,\ CI\ [-1.52, -.31],\ p = .003$).

In Step 2, I added the interaction between gender and relationship commitment which was not significant ($b = .19,\ SE = .208,\ CI\ [-.23,\ .60],\ p = .373$) indicating that the marginally negative association between commitment and ratings of opposite-sex models was not different for men and women.

Hypothesis 2. Next, to determine if the effect of relationship autonomy on derogation was different for men and women, I computed a series of multilevel models in which attractive faces were included as the outcome. In Step 1, the main effects of commitment, relationship autonomy, and gender were simultaneously included as predictors. As in the main analyses, results revealed a marginally negative association between commitment and ratings of opposite-sex models ($b = -.15,\ SE = .082,\ CI\ [-.31,\ .016],\ p = .077$). Experimental condition significantly affected ratings of opposite-sex models such that participants primed with high relationship autonomy rated opposite-sex models as less attractive than participants primed with low relationship autonomy ($b = -.50,\ SE = .232,\ CI\ [-.96,\ -.04],\ p = .032$). There was

also a significant effect of gender such that females rated male models as less attractive than males rated female models ($b = -.90,\ SE = .300,\ CI\ [-1.49,\ -.31],\ p = .003$)

In Step 2, I added three two-way interactions as predictors: commitment x relationship autonomy, commitment x gender, and relationship autonomy x gender. As in the main analyses there was a non-significant interaction between commitment and relationship autonomy condition ($b = .07,\ SE = .168,\ CI\ [-.26,\ .40],\ p = .686$). Further, gender did not interact with either commitment ($b = .06\ SE = .214,\ CI\ [-.36,\ .48],\ p = .774$) or relationship autonomy condition ($b = .58,\ SE = .623,\ CI\ [-.65,\ 1.81],\ p = .356$) to predict ratings of opposite-sex models.

Finally, in Step 3, I added the three-way interaction between commitment, relationship autonomy, and gender, which was not significant ($b = .63,\ SE = .440,\ CI\ [-.24,\ 1.50],\ p = .153$).

Hypothesis 3. To test whether gender moderated the effect of rating attractive faces on changes in commitment, I averaged individual's ratings of attractive models such that each participant had one score for their ratings. I then computed a series of hierarchical regression models in which post-rating commitment was residualized onto pre-rating commitment, creating a change score. In Step 1, I simultaneously included the main effects of relationship autonomy condition, participants' average rating, and gender. As in the main analyses, the main effect of relationship autonomy condition was not significant ($b = .01,\ SE = .094,\ CI\ [-.18,\ .19],\ p = .949$) and there was no observed effect of ratings ($b = -.03,\ SE = .029,\ CI\ [-.02,\ .09],\ p = .265$). Gender also did not significantly predict change in commitment ($b = .11,\ SE = .111,\ CI\ [-.10,\ .33],\ p = .305$).

In Step 2, I added the three two-way interactions: relationship autonomy condition x ratings, relationship autonomy condition x gender, and ratings x gender. The relationship autonomy condition x ratings interaction remained non-significant ($b = -.05,\ SE = .058,\ CI\ [-.17,\ .06],\ p = .348$). Further, gender did not moderate the effect of relationship autonomy condition ($b = -.15,\ SE = .234\ CI\ [-.61,\ .31],\ p = .520$) or ratings ($b = -.08, SE = .064,\ CI\ [-.20,\ .05],\ p = .231$).

Finally, in Step 3, I included the three-way interaction between relationship autonomy condition, ratings, and gender, which did not reach significance ($b = .06,\ SE = .129,\ CI\ [-.19,\ .32],\ p = .628$).

Discussion

Study 2 also found limited support for the main hypotheses of the present research. Unlike in Study 1, the photos appeared to elicit some threat responses, which was observable in the negative association between commitment level and ratings of opposite-sex models. In line with Hypothesis 1a, people who were more committed rated opposite-sex models as less attractive than people who were less committed. This was not true for overall ratings of models (combined opposite and same-sex models). However, contrary to Hypothesis 1b, further analyses revealed that commitment was not differentially related to ratings of opposite-sex or same-sex models, suggesting that opposite-sex (threatening) models did not elicit different reactions than same-sex (non-threatening) models.

Regarding Hypothesis 2, relationship autonomy condition did not moderate the negative association between commitment and ratings of threatening models (Hypothesis 2a). However, relationship autonomy did (marginally) moderate the interaction between commitment and threat condition such that the two-way interaction was significant for people primed with low, but not

high, relationship autonomy. Despite the lack of significance of simple slopes within the two-way, the association between commitment and ratings was nonetheless, and as expected, more negative for opposite-sex (threatening) than same-sex (non-threatening) models. As such, there was some evidence that experiencing higher levels of relationship autonomy reduces the effect of commitment on derogation of alternatives. Further, although unexpected, there was a significant negative effect of relationship autonomy condition such that participants who were primed with high levels of relationship autonomy rated opposite-sex models as less attractive than did participants primed with low levels of relationship autonomy. This is important for two reasons. First, it indicates that the manipulation of relationship autonomy succeeded and led to measureable differences in people's perceptions of others. To my knowledge, this is the first study to provide evidence of the successful manipulation of relationship autonomy, and may be valuable for future research to more fully explore the causal implications of relationship motivation. Second, these findings suggest that experiencing high levels of relationship autonomy increased derogation of attractive alternative partners. This was unexpected, as I expected relationship autonomy to lead to a decrease in the use of derogation rather than an increase. Nonetheless, this finding is interesting as it suggests that relationship autonomy might in fact facilitate the use of this relationship maintenance strategy. It is important to note, however, that as with commitment, threat condition did not significantly moderate this effect. That is, contrary to expectations, the derogation effect is not different for opposite-sex (threatening) versus same-sex (non-threatening) models.

Finally, despite prior research suggesting that derogation of alternatives is a defensive mechanism that maintains commitment to one's relationship in the presence of attractive alternatives, there was no evidence that how one rated opposite-sex models predicted changes in

commitment from before to after ratings (Hypothesis 3) or that this was moderated by relationship autonomy condition (Hypothesis 4).

In total, there was little evidence in Study 2 that relationship autonomy reduces the use of derogation as a covert relationship maintenance mechanism. In fact, although relationship autonomy condition marginally moderated the effect of commitment, relationship autonomy may in fact be related to increased derogation of alternatives. Specifically, participants primed with high relationship autonomy tended to rate opposite-sex models as less attractive than did participants primed with low relationship autonomy.

Study 3

Study 3 sought to expand upon Studies 1 and 2 by examining derogation of alternatives using a community sample. To date, most research on both derogation of alternatives and on self-determination in relationships has been conducted using undergraduate participants, and so it is valuable to determine if such processes function similarly in more generalizable samples. As such, Study 3 involved a non-college sample obtained through Amazon's Mechanical Turk who reported their commitment, relationship autonomy, and then rated the same series of photos from Study 2. Due to the nature of the sample, the lack of observed change in commitment in the previous studies, and for the sake of brevity, commitment was not assessed after ratings. As such, this study was designed to exclusively test Hypotheses 1 and 2 using a paradigm in which derogation was observed in Study 2. This study did not test Hypotheses 3 and 4, which predicted changes in commitment as a function of derogation.

Method

Participants. Participants were married individuals recruited from Amazon's Mechanical Turk. In total, 216 participants who were married and heterosexual signed up for and completed

the study. However, 7 participants were dropped for not successfully answering at least 2 out of 3 check questions (e.g., “For quality purposes, please select 'Somewhat agree'”). In total the present analyses included 209 married individuals, of whom 112 were female (54%) and 97 were male (46%). The average age of the participants was 37.44 years old (*SD* = 11.00) and the average duration of the relationship was 117.04 months (*SD* = 125.08). The sample was somewhat ethnically diverse, with 52% Caucasian non-Hispanic, 35% Asian/Pacific Islander, 7% African American, 4% Latino/a, and 1% other.

Procedure. Participants read a description of the study that was posted on Amazon’s Mechanical Turk, which was ostensibly about the effectiveness of advertisements, and were told the study would ask them to rate pictures of both models and products taken from magazine advertisements. Participants were redirected to the survey, where they first filled out a measure of relationship autonomy and relationship commitment. They were then asked to rate the same series of photos as in Study 2 which included six male models, six female models, and six products (filler). Finally, participants were debriefed and informed about the purpose of the study. Participants were compensated with 10 cents for their participation.

Measures.

Commitment was assessed using the same measure as in Study 1 ($\alpha = .89$).

Relationship autonomy was assessed using the same measure as in Study 1 ($\alpha = .85$).

Evaluation of Alternative Partners. Participants engaged in the same rating task reported in Study 2 ($\alpha = .83$).

Results

Plan of Analysis

Attractiveness was assessed as the average of the three questions (attractiveness, sexual appeal, and interest in meeting them). As in Studies 1 and 2, threat was dummy-coded (0 = same-sex, 1 = opposite-sex), and both relationship autonomy and commitment were grand-mean centered prior to all analyses. Because participants made multiple ratings of attractiveness, I computed multilevel models using SAS 9.4 PROC MIXED to account for the non-independence within participants' ratings. Commitment and relationship autonomy were treated as between-person (level 2) variables, whereas threat condition was treated as a within-person (level 1) variable.

Preliminary analyses

Means and standard deviations of all between-person variables are reported in Table 10. Attractiveness ratings are reported separately by condition (threatening v. not-threatening) and were computed by averaging ratings within participants. Ratings of threat and non-threat photos were positively associated, meaning that participants who gave higher ratings to opposite-sex models tended to do so for same-sex models as well. Ratings of both threatening and non-threatening models were negatively correlated with both commitment and relationship autonomy. Additionally, commitment was positively correlated with relationship autonomy. A dependent samples t-test revealed that opposite-sex (threatening) targets were found to be more attractive than same-sex (non-threatening) targets ($M_{diff} = 1.02, t_{209} = 7.52, d = .525,\ p < .001$). Further, running separate t-tests for men and women revealed significant differences for male ($M_{diff} = 2.29,\ t_{96} = 11.60, d = 1.23,\ p < .001$) but not female ($M_{diff} = 0.04, t_{112} = -.79, d = .081,\ p = .433$) participants.

Table 10. Correlations among all study variables

		Mean (SD)	1	2	3
1.	Threat photo ratings	6.53 (1.73)			
2.	Non-threat photo ratings	5.51 (1.94)	.43***		
3.	Commitment	8.11 (1.26)	-.14*	-.15*	
4.	Relationship Autonomy	16.16 (10.25)	-.19**	-.25***	.68***

* $p < .05$, ** $p < .01$, *** $p < .001$

Main Analyses

Hypothesis 1. Higher levels of commitment would predict greater derogation of threatening (i.e., opposite-sex) photos.

Hypothesis 1a. To test whether commitment predicted lower ratings of opposite-sex models, I computed a multilevel model in which commitment was included as the predictor of the ratings of opposite-sex models. Results (Table 11) revealed a significant negative association between commitment and ratings ($b = -.18,\ SE = .087,\ CI\ [-.35, -.01],\ p = .036$) indicating that higher levels of commitment predicted lower ratings of opposite-sex models relative to people who were less committed.

Hypothesis 1b. In order to test whether commitment differentially predicted the ratings of threatening and non-threatening photos, I computed a series of multilevel models (Table 12) in which all photos (i.e., opposite- and same-sex) were included as outcomes. In Step 1, I included the main effects of threat condition and commitment as predictors. Threat condition was treated

as a within-person variable (level 1) and commitment was treated as a between-person variable (level 2). Results revealed a marginally significant negative association between commitment and ratings ($b = -.14,\ SE = .077,\ CI\ [-.30,\ .01],\ p = .063$) indicating that people who were more committed tended to rate the models as less attractive. There was also a significant effect of threat condition ($b = 1.17,\ SE = .117,\ CI\ [0.94, 1.40],\ p < .001$) such that opposite-sex models were rated as more attractive than were same-sex models.

In Step 2, I added the commitment x threat condition interaction as a predictor. Results revealed a non-significant interaction ($b = .05\ SE = .093,\ CI\ [-.13,\ .23],\ p = .587$), suggesting that the association between commitment and ratings of the models did not differ as a function of threat condition.

Hypothesis 2. Relationship autonomy would moderate the association between commitment and derogation, such that commitment would not be as strongly related to derogation if people are high (as opposed to low) in relationship autonomy.

Hypothesis 2a. To test whether relationship autonomy moderated the association between commitment and ratings of threatening photos, I computed a series of multilevel models in which ratings of opposite-sex models were included as the outcome, the results of which can be found in Table 11. In Step 1, the main effects of commitment and relationship autonomy were included as predictors. Results revealed non-significant associations both between commitment and ratings ($b = -.08,\ SE = .117,\ CI\ [-.31,\ .15],\ p = .510$) and between relationship autonomy and ratings ($b = -.02,\ SE = .015,\ CI\ [-.05,\ .01],\ p = .191$).

In Step 2, I added the commitment x relationship autonomy interaction as a predictor. Results revealed a non-significant interaction ($b = -.002,\ SE = .011,\ CI\ [-.02,\ .02],\ p =$

.817), suggesting that the association between commitment and ratings of opposite-sex models did not differ as a function of relationship autonomy.

Hypothesis 2b. To test whether this differed for threatening and non-threatening photos, I computed a series of multilevel models in which all photos (i.e., opposite-sex and same-sex) were included as outcomes (Table 12). In Step 1, the main effects of threat condition, commitment, and relationship autonomy were included as predictors. Threat condition was treated as a within-person variable (level 1) whereas commitment and relationship autonomy were treated as between-person variables (level 2). There was a significant effect of threat condition ($b = 1.18,\ SE = .117,\ CI\ [0.94,\ 1.41],\ p < .001$) such that opposite-sex models were rated as more attractive than same-sex models. There was no significant association between commitment and ratings ($b = .03,\ SE = .104,\ CI\ [-.18,\ .23],\ p = .810$). However, there was a significant negative association between relationship autonomy and ratings ($b = -.03,\ SE = .013,\ CI\ [-.06, -.01],\ p = .017$) such that participants who were higher in relationship autonomy rated models as less attractive than did participants lower in relationship autonomy.

In Step 2, two-way interactions between all variables were entered as predictors. There were no significant interactions between commitment and relationship autonomy ($b = .00,\ SE = .010,\ CI\ [-.02,\ .02],\ p = .963$), commitment and threat condition ($b = -.11,\ SE = .126,\ CI\ [-.36,\ .14],\ p = .372$). There was, however, a marginally significant interaction between relationship autonomy and threat condition ($b = .03,\ SE = .016,\ CI\ [-.002,\ .06],\ p = .068$).

In Step 3, I included a three-way interaction between threat condition, commitment, and relationship autonomy, which was non-significant ($b = -.003,\ SE = .012,\ CI\ [-.03,\ .02]$, $p = .788$).

Table 11. Multilevel Models Predicting Ratings of Opposite-Sex Models (Hypotheses 1a and 2a) (Study 3)

		Continuous Attractiveness Ratings			
		b	*SE*	*CI*	*p*
Hypothesis 1a					
	Commitment	**-.18**	**.087**	**-.35, -.01**	**.036**
Hypothesis 2a					
	Commitment	-.08	.117	-.31, .15	.510
	RA	-.02	.015	-.05, .01	.191
	Commitment x RA	-.002	.011	-.02, .02	.817

Note. Significant and marginally significant findings are in bold. Relationship commitment is denoted at 'RA'.

Table 12. Multilevel Models Predicting Ratings of All Models (Hypotheses 1b and 2b) (Study 3)

		Continuous Attractiveness Ratings			
		b	*SE*	*CI*	*p*
Hypothesis 1b					
	Commitment	**-.14**	**.077**	**-.30, .01**	**.063**
	Threat	**1.17**	**.117**	**0.94, 1.40**	**<.001**
	Commitment x Threat	.05	.093	-.13, .23	.587
Hypothesis 2b					
	Commitment	.03	.104	-.18, .23	.810
	RA	**-.03**	**.013**	**-.06, -.01**	**.017**
	Threat	**1.18**	**.117**	**0.94, 1.41**	**<.001**
	Commitment x RA	.00	.010	-.02, .02	.963
	Commitment x Threat	0.11	.126	-.36, .14	.372
	RA x Threat	**.03**	**.016**	**-.002, .06**	**.068**
	Commitment x RA x Threat	-.003	.012	-.03, .02	.788

Note. Significant and marginally significant findings are in bold. Relationship commitment is denoted at 'RA' and Threat Condition is denoted as 'Threat'.

To better understand the nature of the interaction between relationship autonomy and threat condition I computed simple slopes to examine the association between relationship autonomy and ratings of attractiveness for same-sex models and for opposite-sex models (Cohen et al., 2003). Results of simple slopes (Figure 2) revealed that relationship autonomy was only negatively associated with ratings of the non-threatening models ($b = -.04, SE = .015,$

$CI\ [-.07, -.02],\ p = .003$) and was not significantly associated with ratings of the threatening models ($b - .02,\ SE = .015,\ CI\ [-.05, .01],\ p = .294$).

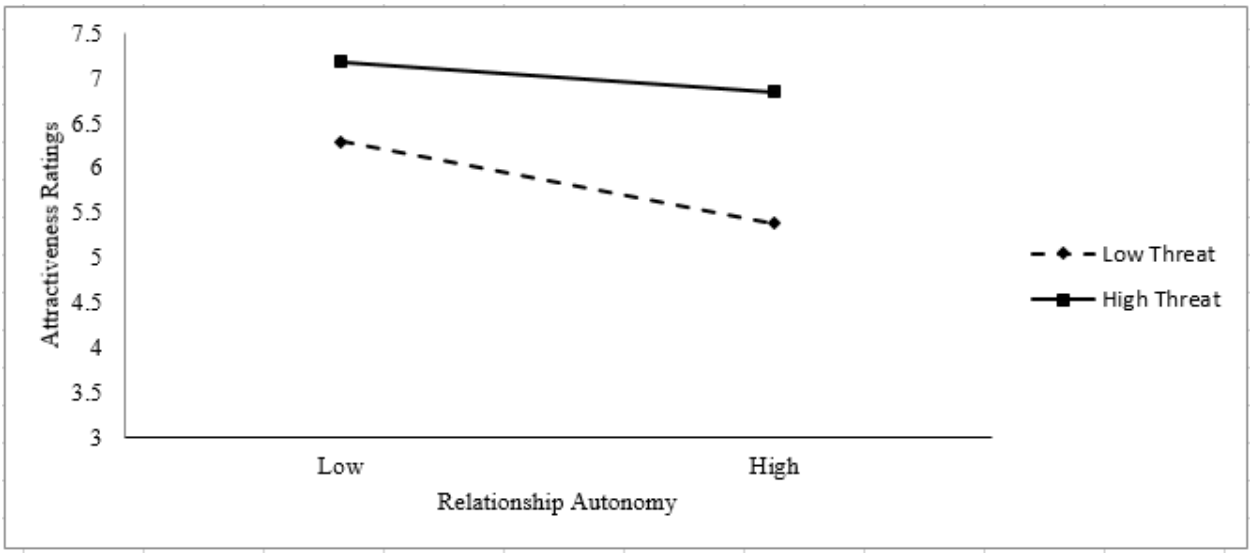

Figure 2. Two-way interaction between relationship autonomy and threat condition (Study 3).

Ancillary Analyses: Gender and Derogation. Next, I conducted exploratory analyses that examined the potential effects of gender on derogation. The plan of analysis followed the same plan as the main analyses, except gender and interactions with gender were added to the previous models. Because derogation is only expected for opposite-sex photos I only considered ratings of opposite-sex photos in these particular analyses. All observations in which the target was same-sex and thus, non-threatening, were not included in these analyses.

Hypothesis 1. To test whether men and women differed in the degree to which they derogated attractive alternatives, I computed a series of multilevel models. In Step 1, both the main effects of commitment and gender were simultaneously included as predictors of the ratings of opposite-sex models. Commitment predicted lower ratings of opposite-sex models

($b = -.18,\ SE = .082,\ CI\ [-.34, -.02],\ p = .028$). As in Study 2, gender was also related to ratings of opposite-sex models such that females rated male models as less attractive than males rated female models ($b = -1.50,\ SE = .210,\ CI\ [-1.91, -1.08],\ p < .001$).

In Step 2, I added the interaction between gender and relationship commitment which was not significant ($b = .13, SE = .167,\ CI\ [-.20,\ .46],\ p = .459$), indicating that the negative association between commitment and ratings of opposite-sex models was not different for men and women.

Hypothesis 2. Next, to determine if the association between relationship autonomy and derogation is different for men and women, I computed a series of multilevel models in which attractive faces were included as the outcome. In Step 1, the main effects of commitment, relationship autonomy, and gender were simultaneously included as predictors. Commitment was not associated with ratings of opposite-sex models ($b = -.03,\ SE = .110,\ CI\ [-.25,\ .18],\ p = .765$). However, relationship autonomy marginally predicted ratings of opposite-sex models such that participants who were higher relationship autonomy rated opposite-sex models as less attractive than participants lower relationship autonomy ($b = -.03,\ SE = .014,\ CI\ [-.05,\ .00],\ p = .054$). There was also a significant effect of gender such that females rated male models as less attractive than males rated female models ($b = -1.54,\ SE = .209,\ CI\ [-1.95,\ -1.13],\ p < .001$).

In Step 2, I added three two-way interactions as predictors: commitment x relationship autonomy, commitment x gender, and relationship autonomy x gender. As in the main analyses there was a non-significant interaction between commitment and relationship autonomy ($b = .004,\ SE = .011,\ CI\ [-.02,\ .01],\ p = .725$). However, gender did marginally interact with

both commitment ($b = .43\ SE = .235,\ CI\ [-.04,\ .89],\ p = .069$) and relationship autonomy ($b = -.05,\ SE = .028,\ CI\ [-.101,\ .01],\ p = .100$) to predict ratings of opposite-sex models.

Finally, in Step 3, I added the three-way interaction between commitment, relationship autonomy, and gender, which was not significant ($b = .004,\ SE = .022,\ CI\ [-.04,\ .05],\ p = .860$).

To better understand the nature of the two-way interactions between gender and commitment as well as between gender and relationship autonomy, I computed simple slopes for men and women (Cohen et al., 2003). Regarding commitment, simple slopes revealed that commitment was not significant for either men ($b = -.16, SE = .156, CI\ [-47, .15], p = .302$) or women ($b = .27, SE = .224, CI\ [-.17, .71], p = .235$). However, it is interesting to note that the sign is negative for men but positive for women. Relationship autonomy, meanwhile, negatively predicted ratings of attractive opposite-sex models for women ($b = -.06, SE = .021, CI\ [-.097, -.014], p = .010$) but not for men ($b = -.01, SE = .018, CI\ [-.04, .03], p = .595$).

Discussion

Study 3 found minimal support for the main hypotheses of the present research. Unlike in Study 1, but similar to Study 2, the photos appeared to elicit some threat responses. Namely, I found a negative association between commitment level and ratings of opposite-sex models. In support of Hypothesis 1a, people who were more committed rated opposite-sex models as less attractive than people who were less committed. However, contrary to Hypothesis 1b, there was also a marginal negative association between commitment and ratings of all models (both same-sex and opposite-sex included as the outcome), and further analyses revealed that commitment was not differentially related to ratings of opposite-sex or same-sex models. This suggests that

opposite-sex (threatening) models did not elicit different reactions than same-sex (non-threatening) models, and thus, derogation did not occur at higher rates for threatening and non-threatening targets.

Regarding Hypothesis 2, that relationship autonomy would moderate the use of derogation, I found no evidence that relationship autonomy was related to ratings of the models. First, there was no association between relationship autonomy and ratings of opposite-sex models. Inclusion of relationship autonomy in the model also reduced commitment to non-significance. Further, relationship autonomy did not moderate the association between commitment and ratings of models suggesting that, contrary to Hypothesis 2, the derogation effect is not different for opposite-sex (threatening) versus same-sex (non-threatening) models. More specifically, the association between commitment and ratings of attractive models did not differ as a function of relationship autonomy (Hypothesis 2a) nor did this differ for threatening or non-threatening models (Hypothesis 2b). That is, there was no evidence that experiencing higher levels of relationship autonomy reduces the effect of commitment on derogation of alternatives.

I found similar results as Study 2 such that relationship autonomy predicted lower ratings of models. This again suggests that relationship autonomy may facilitate derogation of alternatives, rather than acting as a buffer against it. However, unlike Study 2, results of Study 3 found that non-threatening models but did not predict ratings of threatening models. Why might this be? Although I can only speculate as to why I found this particular pattern, it is possible that derogating attractive same-sex individuals also plays a protective function in the relationship by reducing jealousy and increasing security in one's relationship. That is, by devaluing attractive same-sex individuals one is essentially derogating *one's partner's* alternatives. This may serve to

increase confidence in one's partner's commitment and thus one's sense of felt security (Murray, 2005). However, given that this specific pattern did not also emerge in Study 2, I am hesitant to draw strong conclusions, though this finding may warrant future research to more fully explore this mechanism.

Exploratory gender analyses did find that gender played a role in ratings of the models. Specifically, as in Study 2, females tended to rate the male models as less attractive than males tended to rate the female models. Additionally, gender moderated the association between relationship autonomy and ratings of opposite-sex models such that women higher in relationship autonomy tended to rate male models as less attractive, but men's relationship autonomy was unrelated to ratings of female models. In this model, there was also a significant interaction between commitment and gender. However, because these interactions did not emerge in either Studies 1 or 2, I am hesitant to draw conclusions about these interactions. Further, because gender and commitment did not interact in the model that did not include relationship autonomy (they only interacted in the model that also included relationship autonomy and the relationship autonomy x commitment interaction) and the lack of significant associations between commitment and ratings for either men or women, I urge even further caution in interpreting the interactions between gender and commitment.

General Discussion

This dissertation was designed to outline and test the autonomy and derogation of alternatives model (ADAM). The ADAM built off of a body of literature which suggests that people in committed romantic relationships tend to derogate attractive alternative partners in order to maintain their commitment to said relationship (Johnson & Rusbult, 1989; Miller, 1997; Simpson et al., 1990). Derogation of alternatives is largely thought to be a defensive, preemptive,

and covert relationship maintenance mechanism that acts below conscious awareness but still requires active cognitive resources to successfully downplay the attractiveness of potential other partners (Petit & Ford, 2015; Ritter, Karremans, & van Schie, 2010). Further, derogation tends to occur as a function of commitment such that the more committed one is to a relationship, the more one would lose if they left the relationship, and thus, the more threatening an attractive alternative is. In response to this perceived threat, people downplay the attractiveness of the alternative in order to justify their current relationship. The ADAM's main contribution to the current literature was to suggest that this effect would be moderated by the degree to which one is intrinsically motivated to be in one's relationship. That is, I expected that people who were more intrinsically motivated to be in their relationship would not be as tempted or threatened by attractive alternative partners, and thus, would not need to derogate them in order to maintain their commitment.

The present research had four primary hypotheses. Hypothesis 1 predicted that I would replicate prior findings that people who are more committed rate attractive opposite-sex targets lower than do people who are less committed. Hypothesis 2 predicted that relationship autonomy would moderate this effect such that people who are more intrinsically motivated to be in their relationship (i.e., higher relationship autonomy) would not derogate attractive alternative partners, regardless of their level of commitment. Hypothesis 3 was designed to test an as yet untested assumption within the derogation of alternatives literature. Namely, that recognizing attractive alternative partners as *attractive* is a threat to people's commitment. As such, Hypothesis 3 predicted that higher ratings of attractive opposite-sex targets would predict reduction in commitment. Finally, Hypothesis 4 predicted that, because relationship autonomy reduces the likelihood of being tempted away (even by attractive others), people who are higher

in relationship autonomy would not exhibit a decrease in commitment as a function of their ratings.

I tested these hypotheses across three separate studies. Study 1 employed a cross-sectional methodology among an undergraduate population to examine whether measures of relationship commitment and relationship autonomy predicted both continuous ratings of faces and a dichotomous yes/no decision as to whether they would consider dating the person in the picture. In Study 1, participants were asked to rate pictures of both attractive and unattractive opposite-sex people who were ostensibly single students at the university. Study 2 also used an undergraduate population to test the above hypotheses. However, instead of simply measuring relationship autonomy, I actively manipulated relationship autonomy such that participants were primed with either high or low relationship autonomy immediately before rating a series of pictures. Study 2 also operationalized threat differently, such that all participants rated pictures of opposite-sex (threat) and same-sex (no-threat) models who were all considered attractive. Finally, Study 3 employed a cross-sectional design to examine these phenomena in a sample of married individuals rather than from a college student population, and used the same photos as Study 2.

Results across the three studies found minimal support for the ADAM such that relationship autonomy did not predict derogation of alternatives in ways consistent with the hypotheses. I did find some evidence for Hypothesis 1 such that commitment negatively predicted ratings of threatening targets in Studies 2 (marginally) and 3, but not in Study 1. However, even in Studies 2 and 3, commitment did not differentially predict ratings of threatening (opposite-sex) and non-threatening (same-sex) models indicating that derogation did not function exactly according to predictions. Further, when controlling for relationship

autonomy in Study 3, commitment was no longer a significant predictor of ratings of threatening photos. This same type of analysis was not possible in Study 2, as relationship autonomy was experimentally primed after participants rated their commitment, and thus, the two variables were unrelated.

There was less evidence regarding Hypothesis 2, which hypothesized that relationship autonomy would reduce both the use and necessity of derogating attractive alternatives. Across all three studies, relationship autonomy did not moderate the association between commitment and ratings of threatening targets. Further, the three-way interaction between commitment, relationship autonomy, and threat condition only emerged as marginally significant in Study 2, but not in Studies 1 and 3. Closer examination revealed that this interaction functioned similarly to predictions. That is, commitment interacted with threat condition for those primed with low, but not high, relationship autonomy. Further, among those low in relationship autonomy, commitment was more negatively (though still not significantly) associated with ratings of threatening, opposite-sex models than for non-threatening, same-sex models. As such, Study 2 provides some evidence that relationship autonomy buffers against derogation of alternatives in the present data. However, it is important to note that relationship autonomy tended to predict lower ratings of the targets as well (Studies 2 and 3), meaning that relationship autonomy may not buffer derogation of alternatives, but rather itself cause derogation. Curiously, this was primarily the case for non-threatening targets, whereas relationship autonomy was generally unrelated to ratings of threatening targets.

Regarding Hypothesis 3, although it has been suggested by prior research that people derogate in order to maintain commitment to their existing relationship (e.g., Johnson & Rusbult, 1989; Simpson et al., 1990; Petit & Ford, 2015), I only found that rating threatening targets as

more attractive marginally predicted decreases in commitment in Study 1, but not Studies 2 or 3. Further, this marginal association only emerged for continuous ratings of attractiveness, and not the proportion of faces participants said they would consider dating. As such, I urge caution in interpreting this finding. Finally, regarding Hypothesis 4, relationship autonomy did not moderate the association between ratings of threatening targets and changes in commitment in Studies 1 or 2.

Does Motivation Matter?

Although the research presented in this dissertation provided little support for the ADAM, it is less clear exactly why relationship autonomy did not function in the anticipated ways. The first, and perhaps most obvious, explanation is that relationship autonomy does not, in fact, influence how commitment is related to the derogation of alternatives. For instance, although relationship autonomy was predicted to lower defensive responses to threatening alternatives, as measured, relationship autonomy has a high amount of conceptual overlap between a number of relationship constructs that increase derogation. Relationship autonomy is highly correlated with commitment (*r*'s of .64 and 68 in Studies 1 and 3, respectively), and may be strongly tied to relationship-specific identification (Linardatos & Lydon, 2011), both of which have been linked to relationship maintenance processes.

As such, although trait autonomy has previously been found to reduce responses to threatening stimuli (Hodgins, 2008; Hodgins & Knee, 2002), the aspect of relationship autonomy that is tied to commitment and identification with the relationship may mean that the relationship is simply more important, and thus, relationship autonomy does not reduce the need to react defensively against external threats to the relationship but rather facilitates such relationship maintenance behaviors. Indeed, even though relationship autonomy has been found to predict

less defensive responses to conflict (Knee et al., 2005), it is possible that relationship autonomy does not necessarily reduce defensive responses to relationship threats, but rather promotes mechanisms that are beneficial for the relationship. Relationship autonomy might reduce defensive responses to conflict not because a person does not perceive a threat, but rather because they are more aware of what is good for the relationship. In other words, people high in relationship autonomy may downplay the attractiveness of alternatives because it is ultimately beneficial for the relationship. This assertion is supported by the findings in Studies 2 and 3 that relationship autonomy predicted lower ratings of attractiveness (albeit primarily for non-threatening targets). Study 2 provided experimental evidence that relationship autonomy decreases perception of the attractiveness of models while Study 3 provided correlational evidence in a non-college student sample. The combination of experimental and correlational evidence provides evidence that relationship autonomy lowers perceptions of attractiveness. Further, the experimental evidence provided in Study 2 is especially interesting because this is to my knowledge the first successful experimental manipulation of relationship autonomy.

However, it remains possible that relationship autonomy may still function in ways consistent with the ADAM. First, it is important to note that although I switched the rating stimuli after Study 1 due to the relatively low ratings of the attractive photos (average rating of 4.20 out 10), even the models used in Studies 2 and 3 were not rated very highly in the present research (average rating of 5.73 out of 10 in Study 2, 6.53 out of 10 in Study 3). As such, it is possible that the present studies did not elicit the type of threat required to provoke a strong derogation effect that relationship autonomy may buffer against. Second, prior research has shown that derogation is most likely to occur when the threat level matches a person's level of commitment (Lydon et al., 1999; Lydon et al., 2003). Because the photos used in Study 1 were

rated as relatively unattractive and the photos used in Studies 2 and 3 were pictures of models, it is possible that the stimuli did not create the appropriate kind of reaction for relationship autonomy to buffer against. Indeed, Lydon's prior work specifically created situations in which participants thought the people they were rating were real and it was likely they would meet some of these people. For instance, Lydon and colleagues (1999) told participants that they were also being rated by the people in the photos (who were ostensibly other participants in the study) and that the person they were rating was attracted to them in return. This likely increased the realism for participants in a way that the studies conducted as part of this dissertation did not. Amid this speculation, it is important to note, however, that commitment did negatively predict ratings of threatening faces in Studies 2 and 3 (though not when controlling for relationship autonomy), which suggests that there was at least a mild derogation reaction.

Finally, it is possible that, although relationship autonomy may not buffer against derogation of alternatives, it may alter the mechanism. As discussed earlier, derogation of alternatives is a defensive cognitive mechanism, rather than a perceptual mechanism (Petit & Ford, 2015; Ritter et al., 2010). Relationship autonomy may lower ratings of targets not because of a defensive reaction, but rather because the target is perceptually less attractive. This would suggest that the mechanism behind relationship autonomy and derogation is automatic, rather than an effortful cognitive (yet still below conscious awareness) process.

Limitations and Future Directions

The present research had several limitations. Notably, and as mentioned previously, the stimuli used in the present study were rated as relatively unattractive. Derogation of alternatives occurs primarily in response to attractive opposite-sex people, as it functions as a mechanism to maintain one's own commitment by justifying one's relationship. As such, the stimuli used in the

present studies were somewhat weak. Further, the present research simply asked participants to rate a series of pictures on a computer, limiting the extent to which participants may have actually felt that these were realistic alternatives, and thus, reducing the need to derogate them. Study 1 attempted to address this by telling participants that the people in the pictures were single students at the same university as the participant, but the average rating of the attractive photos was so low that no threat response appears to have been elicited. As such, future work may seek to utilize stronger stimuli to evoke derogation of alternatives from participants. For instance, future research might identify more attractive and realistic photos. Further, future research may opt for a more naturalistic design in which participants are asked to rate people they think they may interact with, or people they just interacted with in a laboratory procedure. In this case, the sense of realism will be heightened for participants, and a real threat response may be more likely to be elicited.

Further, derogation is not the only relationship maintenance mechanism that functions to maintain commitment in the face of attractive alternatives. For instance, another mechanism that has received a growing amount of attention is inattentiveness to alternatives (Miller, 1997, 2003). Inattentiveness is a mechanism whereby people who are highly committed also tend to simply not pay extra (or in some cases, pay less) attention to attractive potential partners (Maner, Gailliot, & Miller, 2009; Mainer, Gailliot, Rouby, & Miller, 2007; Maner, Rouby, & Gonzaga, 2008). Future research may examine the role that relationship autonomy plays in inattentiveness to alternatives. That is, it is possible that people who are high in relationship autonomy simply do not register attractive others as potential alternative partners, and thus, do not attend to them more than they do others.

Conclusion

The present research put forth and tested the autonomy and derogation of alternatives model (ADAM), which hypothesized that relationship autonomy would reduce both the use and necessity of derogation of attractive alternative partners. Across three studies, two cross-sectional and one experimental, I found limited support for this hypothesis. Specifically, relationship autonomy did not moderate the association between commitment and ratings of attractive opposite-sex others. Moreover, relationship autonomy did not moderate the association between ratings of attractive opposite-sex others and changes in commitment, with the exception of a marginally significant interaction in Study 2. In fact, relationship autonomy was most consistently associated with lower ratings of the photos used in the present studies, suggesting that people high in relationship autonomy perceive others as less attractive (though this tended to be only when rating non-threatening targets). In sum, the present research found little support for the proposed hypotheses, suggesting that relationship autonomy does not, in fact, buffer against the need for or use of derogation.

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Appendix A

Rusbult Investment Model – Commitment Subscale

Instructions: Please indicate how much you agree with the following statements. These statements pertain to your relationship with your CURRENT romantic partner.

1 Do not agree at all	2	3	4	5 Somewhat agree	6	7	8	9 Agree completely

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

Appendix B

Couples Motivation Questionnaire (CMQ) (Blais et al., 1990)

Instructions: Please take a few moments to think about the reasons why you are currently in the relationship with your partner. Using the scale below, indicate the degree to which you feel each of the following statements corresponds to your reasons for having a relationship with your romantic partner by placing the appropriate number beside each statement.

1	2	3	4	5	6	7
Does not correspond at all						Corresponds exactly

Why are you in this relationship?

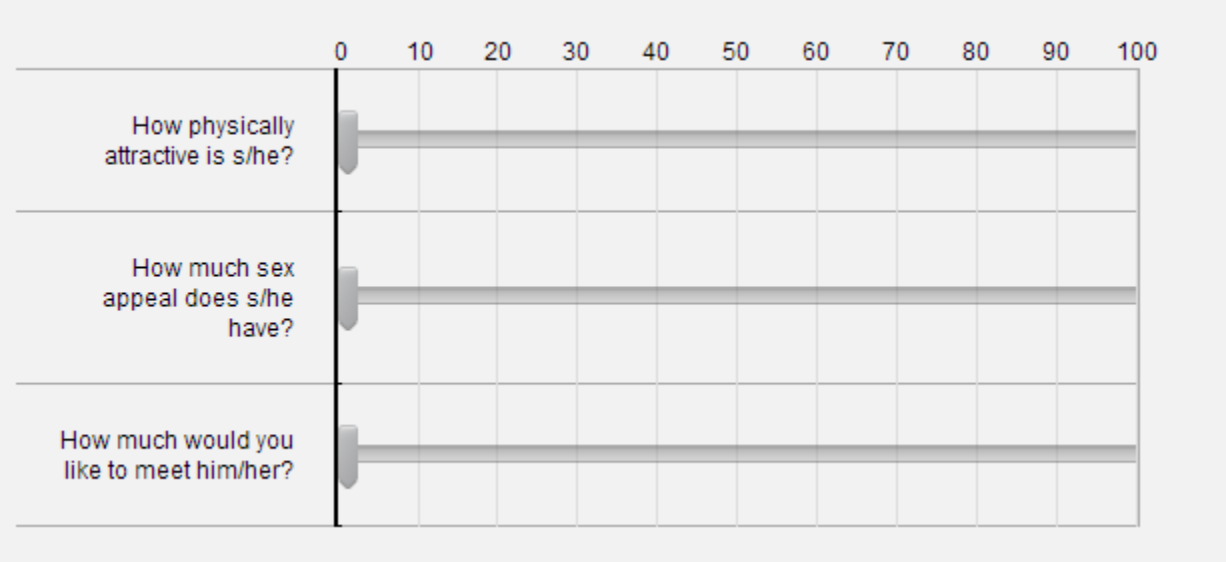
1. Because I need to be in a relationship with my partner to feel important.
2. Because I value the way my relationship with my partner allows me to improve myself as a person.
3. Because I value the way our life as a couple gives me the opportunity to participate in new activities.
4. Because I love the many fun and exciting times I share with my partner.
5. Because I would feel guilty if I separated from my partner.
6. Because people who are important to me (e.g., children, friends, family) are proud of our relationship and I wouldn't want to disappoint them.
7. Because my partner wouldn't be able to cope with a separation.
8. Because this I the person I have chosen to share life plans that are important to me.
9. There is nothing motivating me to stay in my relationship with my partner.
10. Because I do not want to live alone.
11. Because with my partner, I feel free to commit myself to future plans that I hold dear.
12. Because my relationship allows me to share my emotions and special moments with someone.
13. Because my relationship is a commitment that I must keep.
14. Because the many deep and meaningful discussions I have with my partner are very satisfying to me.
15. Because being with my partner gives me the opportunity to develop new abilities that I didn't know I had.
16. Because the moments I share with my partner are very stimulating and satisfying to me.
17. I don't know. In all honesty, I don't feel like making the effort to keep this relationship together.
18. I don't know why anymore. Our relationship is destined to fail since I no longer see any possibility of saving it.

APPENDIX C

Evaluation of Alternative Partners (Study 1)

Instructions: In the next part of the survey, you are going to be shown a series of photos of students at UH. These are single students at UH who have signed up for a speed-dating study, and it is important for use to gauge how "dateable" this pool is. As such, we want you to rate the attractiveness of some of these participants. When you are ready, please proceed to the next page.

Research has shown that people currently in relationships are more attuned to whether or not people will make good dating partners. As such, in this section, you will asked to judge whether you would consider each person to be a potential partner, irrespective of your current relationship status, and to rate them along several types of attractiveness. You will be shown each picture individually, and will move on to the next picture after submitting an answer.



Would you consider this person to be a potential partner, irrespective of your current relationship status?

Yes

No

Below are sample photographs from the dataset:

APPENDIX D

Relationship Autonomy Prime

High relationship autonomy

Below are several statements. We are interested in the way people process written statements.

One of the most telling ways to identify processing differences is to assess the spontaneous errors people make when copying different types of statements.

As such, you will be shown one statement at a time. Please write each statement 4 times in the lines below as quickly as possible.

Do not worry about or fix any errors you make.

I love the many fun and exciting times I share with my partner.

I feel that I have a number of good qualities.

My relationship with my partner allows me to improve myself

I see myself as reserved, quiet.

The deep and meaningful discussions I have with my partner are very satisfying.

Low relationship autonomy

Below are several statements. We are interested in the way people process written statements.

One of the most telling ways to identify processing differences is to assess the spontaneous errors people make when copying different types of statements.

As such, you will be shown one statement at a time. Please write each statement 4 times in the lines below as quickly as possible.

Do not worry about or fix any errors you make.

I would feel guilty if I separated from my partner.

I feel that I have a number of good qualities.

Others are proud of my relationship and I don’t want to disappoint them.

I see myself as reserved, quiet.

My partner wouldn’t be able to cope with a separation.

Appendix E

Evaluation of Alternative Partners (Studies 2 & 3)

Instructions: Now that we know a little about you, we would to get a sense of how much you like the following ads. Past research has shown that both the product and the models are important for whether people will buy products. As such, in some pictures you will rate a product, and in others you will rate the model.

You will be shown each picture individually. Please use the scales to rate how attractive the person or product is, and how much you would like to meet the person or use the product.

1. How attractive do you find the person/product?
2. From your perspective, how much sex appeal does the person in this ad possess?
3. How interested would you be in meeting the person/using the product?

Photos to be used are on the following page.

Male Pictures

Female Pictures

Product Pictures (Filler)