

Relationship Perceptions: Effects of Perceived Control, Efficacy, and Optimism  
on Relationship Satisfaction and Longevity

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**Relationship Perceptions: Effects of Perceived Control, Efficacy, and Optimism  
on Relationship Satisfaction and Longevity**

**BY**

**Joelle C. Ruthig**

**A Thesis/Practicum submitted to the Faculty of Graduate Studies of The University of  
Manitoba in partial fulfillment of the requirement of the degree**

**Of**

**Doctor of Philosophy**

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## Abstract

Perceived control, self-efficacy, and optimism influence various aspects of our everyday lives, yet they have not been examined together within the context of romantic relationships. Two studies, one longitudinal and one cross-sectional in nature, explored relationship-specific attributions, perceived control, efficacy, and optimism among individuals involved in exclusive romantic relationships. Study 1 examined controllable and uncontrollable attributions, primary and secondary control, efficacy, and optimism as predictors of relationship satisfaction and longevity over a five-month period among 438 Introductory Psychology students involved in romantic relationships. It was hypothesized that making controllable attributions and higher levels of primary control, efficacy, and optimism would predict subsequent relationship satisfaction and longevity. These predictions were partially supported: primary control positively predicted initial satisfaction and efficacy predicted satisfaction both initially and five months later. Surprisingly, initial secondary control negatively predicted both satisfaction and longevity five months later. Study 2 explored how 154 participants' relationship perceptions varied as a function of age (17 to 77 years of age) and certain life events (i.e., marriage, parenthood, empty nest, retirement). Based on control theory, primary and secondary control were expected to vary as a function of age. Contrary to this prediction, control perceptions did not vary with age, nor did any other relationship perception assessed, suggesting that individuals can have satisfying relationships, no matter what age they are. Also as in Study 1, greater primary control and efficacy were associated with more satisfying relationships, whereas greater secondary control was associated with less satisfying relationships. Thus, findings among Introductory Psychology

students in Study 1 were largely replicated among a wider range of the adult life span represented in Study 2. Finally, some relationship perceptions such as controllable attributions and secondary control differed with certain life events, including marriage and parenthood, particularly among women, yet none of the life events impacted satisfaction or love, suggesting that individuals who get married, become a parent, or having an empty nest can still be involved in highly satisfying and loving romantic relationships.

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Relationship Perceptions: Effects of Perceived Control, Efficacy, and Optimism  
on Relationship Satisfaction and Longevity

When asked to imagine the perfect romantic relationship, most people would almost certainly view it as highly satisfying and long lasting. In fact, many people go to great lengths in attempt to discover precisely what will make their own relationship satisfying and lasting. Some individuals seek professional guidance from relationship counselors, while others rely on more dubious resources. The desire to have an “ideal” relationship is often reflected in countless tips, strategies, and tactics provided by the media, pop culture, and so called relationship “experts” that people are bombarded with when they turn on the television, listen to the radio, or flip through a magazine. Similarly, although somewhat more scientifically, the goal of many relationship researchers has been to identify specific predictors of relationship satisfaction and longevity (e.g., Berscheid & Lopes, 1997; Cate, Levin, & Richmond, 2002; Kaplan & Maddux, 2002; Larson & Holman, 1994; Sacher & Fine, 1996; Tucker & Anders, 1999). Many of these researchers have found that satisfaction itself can be a major determinant of whether a couple stays together or ends their relationship (Shackelford & Buss, 1997; Sprecher, 2001).

Although researchers have examined several potential predictors of satisfaction and longevity in attempting to develop the “ideal formula” for romantic relationships, most have neglected to consider the impact of perceived control, efficacy, and optimism in predicting relationship satisfaction and longevity. Individual differences in perceptions of control, efficacy, and optimism have been found to influence various aspects of daily

life, including academic achievement (e.g., Elias & Loomis, 2002), psychological and physical health (e.g., Scheier & Carver, 1987; Taylor & Brown, 1988), and successful aging (e.g., Schulz & Heckhausen, 1996), yet their combined roles within the context of romantic relationships have not been examined. This seems odd considering that in addition to physical attraction, passion, and other factors often portrayed as predicting an “ideal” relationship, it is likely that hard work, active participation, and a positive outlook contribute to a satisfying and long-lasting relationship.

Two studies, one longitudinal and one cross-sectional in nature, were used to explore this possibility. The main objective of Study 1 was to examine the roles of perceived control, efficacy, and optimism in relationship longevity and satisfaction over time among individuals in romantic relationships. The objectives of Study 2 were to reassess these associations and to examine how each of these relationship perceptions fluctuate in accordance with various life experiences (e.g., marriage, parenthood, retirement) and across a wide range of the adult lifespan (i.e., 17-77 years of age).

#### *Relationship Satisfaction and Longevity*

Two important questions often asked by relationship researchers are whether individuals are satisfied with their relationships (e.g., Caughlin, 2002; Hendrick, Hendrick, & Adler 1988; Collins & Read, 1990; Van Yperen & Buunk, 1990) and whether those relationships are going to last (e.g., Impett, Beals, & Peplau, 2002; Kurdek, 2002). Why is satisfaction considered to be such an important factor in relationships? It is important because high levels of satisfaction in intimate relationships tend to be associated with greater emotional stability and commitment in the relationship (Shackelford & Buss, 1997; Sabatelli & Cecil-Pigo, 1985), greater trust and willingness

to invest in the relationship (Rempel, Holmes, & Zanna, 1985), and a higher quality of interaction between partners (Brehm, 1992). Perhaps the most critical result of greater satisfaction is the likelihood of a longer lasting relationship (Shackelford & Buss 1997).

Several factors have been found to predict satisfaction and longevity in romantic relationships. Among these predictors, Sternberg (1986) suggests that commitment, passion, and intimacy are especially important components of love to be considered. Generally, high levels of each of these love components are associated with high levels of relationship satisfaction. Intimacy is defined as the warmth a couple feels when they are close and is the bond or psychological closeness that forms between them. It is often manifested as communication between partners and tends to increase at the beginning of a relationship then eventually plateau (Sternberg & Barnes, 1988). Passion, the sexual attraction between partners, grows rapidly at first, then tends to level off. Commitment, the decision a couple makes to stay together (Barnes & Sternberg, 1997), gradually increases throughout the relationship and in long-term relationships, may eventually level off (Sternberg & Barnes, 1988). Couples who experience passion accompanied by a strong friendship or intimacy and commitment are likely to be very satisfied with their relationship (Hendrick & Hendrick, 1997; Sabatelli & Cecil-Pigo, 1985; Van Lange, Agnew, Harinck, & Steemers, 1997).

These components of love were assessed in the current studies. In addition, both studies expanded upon previous relationship satisfaction and longevity research in several important ways. First, in order to assess whether it changes over time and whether it predicts relationship longevity, satisfaction was measured at two different points in time (approximately five months apart) in Study 1. Second, the associations

between perceived relationship control and efficacy with satisfaction and longevity were explored in order to address the notion that actively participating in one's relationship should predict longevity and satisfaction in that relationship. Moreover, a positive outlook may also play a role in relationship maintenance. As such, optimism was examined in order to determine its connection to relationship satisfaction and longevity. Finally, the associations between perceptions of relationship control, efficacy, and optimism with satisfaction and longevity were explored in terms of how they vary according to age and different life events. For instance, many significant life events, such as marriage, parenthood, retirement, and an "empty nest" may all lead to changes in perceptions of the relationship, both in terms of one's role in that relationship and one's evaluation of that relationship. As such, Study 2 was used to explore how age and different life events relate to various relationship perceptions.

Contemplation of the associations between relationship perceptions and satisfaction, longevity, age, and life events requires greater comprehension of these perceptions in terms of their definitions, antecedents, and relations to one another. Thus, further consideration of these relationship perceptions is provided in the subsequent sections of this dissertation. That is, perceived control, efficacy, and optimism are discussed in greater detail in terms of theoretical background, previous research, and contributions to existing knowledge of relationship satisfaction and longevity.

### *Perceived Control*

Perceived control, the subjective capacity to manipulate some aspect of the environment (Schulz, 1976) or to influence or predict outcomes (Perry, 1991) has evolved as a construct over the past several decades. Early exploration of perceived

control began in basic psycho-physiological research (Glass and Singer, 1973), and as an extension of social learning theory (Rotter, 1954, 1966, 1975). While exploring the effects of noise on behavior, Glass and Singer discovered that perceived control partially determined the aftereffects of noise exposure (noise being any sound that is considered physiologically stressful). In particular, these authors found that being unable to predict noise led to worse aftereffects than when the noise was predictable. Furthermore, perceptions of control over the noise also decreased the adverse aftereffects. Glass and Singer concluded that perceptions of control, whether perceived influence over or prediction of noise, can influence the impact of the noise on adverse aftereffects, with higher perceptions of control being more favorable than lower perceptions of control.

Other early research examined perceived control among institutionalized older adults. In particular, Rodin and Langer (1977) explored the effects of perceived control on health and mortality among elderly nursing home residents. These researchers found that elderly individuals who were given an intervention designed to increase their feelings of control (i.e., they were given choice and a sense of personal responsibility over certain daily activities) had better health and lower mortality than elderly individuals who did not receive the intervention. Similarly, Schulz (1976) found that giving institutionalized elderly individuals control over when and how long they were visited by an undergraduate student enhanced their psychological well-being.

Compared to the above pivotal work (i.e., Glass & Singer 1973; Rodin & Langer, 1977; Schulz, 1976), Rotter's early research (1954, 1966) focused less on the consequences of perceived control and more on the construct itself. According to Rotter (1975), the concept of locus of control originated from an interest in being able to predict

how reinforcements change individuals' expectancies. Specifically, individuals with an internal locus of control tend to perceive reinforcement to be contingent on their own actions. In contrast, individuals with an external locus of control tend to perceive reinforcement to be noncontingent on their actions, and instead dependent upon some outside force (e.g., luck, chance, or fate). Rotter's locus of control construct was trait-like in that it was intended to predict behavior over time and across a wide range of potential situations, such as health, clinical, and social settings.

Rotter's (1975), Glass and Singer's (1973), and Rodin and Langer's (1977) early work provided a solid foundation for further development of the construct and a greater understanding of perceived control. Generally, researchers agree that a sense of control depends on perceived contingency between action and outcome (Rothbaum, Weisz, & Snyder, 1982; Rotter, 1966). Moreover, the underlying assumption of control theory is that individuals desire to produce action-event contingencies and this perceived capacity to change, influence, or predict refers to events or outcomes that are external to the individual (Schulz & Heckhausen, 1996). This motivation for control is believed to fuel development throughout the life course and to regulate the type of situations that individuals put themselves in and their capacity to deal with those situations. A sense of control is adaptive because if individuals fail to engage their external world their developmental potential cannot be realized (Schulz & Heckhausen, 1996). In fact, one of the greatest human fears is of "losing control," as maintaining control is among the strongest human motivations and basic needs (Shapiro, Schwartz, & Astin, 1996).

*Attributions as determinants of perceived control.* Perceived control is a product of the individual's attributions for outcomes. According to attribution theory (Heider,

1958; Kelly, 1967, 1973; Weiner, 1986), individuals continuously seek to explain outcomes and events in their daily lives. Briefly from a theoretical perspective, these causal attributions (explanations for outcomes) vary along three dimensions: locus of causality (internal/external), stability (stable/unstable), and controllability (controllable/uncontrollable; Weiner, 1985). For instance, effort may be viewed as internal, unstable, and controllable, whereas luck may be viewed as external, unstable, and uncontrollable. These causal dimensions partly address the stability of control posited by Rotter (1975).

Individuals' causal attributions and perceptions of control are related in that certain causal attributions are associated with higher or lower perceptions of control. In order to influence an outcome, individuals must perceive the outcome as being within their control or dependent on their own actions. In this sense, perceived control is a product of the individual's belief in the contingency between his or her actions and an outcome, with the contingency belief being shaped by the individual's causal attributions. The stronger the perceived contingency, the greater the sense of control. Specifically, if an outcome is attributed to internal, controllable causes, an individual is likely to view the outcome as dependent on his or her actions, resulting in higher perceptions of control than if the outcome was attributed to external, uncontrollable causes (Weiner, 1986). Thus, in terms of motivation, individuals' subjective perceptions of control are often more important than objective measures of their actual control (Shapiro et al., 1996). Further, perceived control should be thought of as varying across activities and situations, rather than as a global, stable trait. As such, individuals may have high perceived control in some situations and lower perceived control in others. This variability represents an advancement in control theory in terms of the modification

of Rotter's (1975) trait-like locus of control.

Examples of the relationship between attributions and perceptions of control are readily available within various social domains. According to Weiner's (1985) theory, individuals who attribute social failure to internal, stable, uncontrollable causes, such as social awkwardness or lack of physical attractiveness, will experience debilitating emotions (e.g., hopelessness) and their expectancies of success will decrease, resulting in a lack of persistence and avoidance of future social interactions. These individuals will likely feel low control in this situation and as a result, they may no longer strive toward succeeding in future social engagements. In contrast, Weiner suggests that individuals who attribute social failure to lack of effort (an internal, controllable, and unstable attribution) will experience motivating emotions (e.g., guilt) and their expectations of success will be maintained, resulting in persistence and approach toward future social interactions. In this case, the individuals have higher perceived control over their social interactions and consequently they are likely committed to trying harder to avoid future failure. For instance, an individual who is rejected by a potential partner may attribute the rejection to her own lack of physical attractiveness, an internal, uncontrollable, and stable attribution. This attribution will likely result in feelings of discouragement and hopelessness and may lead to avoidance of trying again because the individual feels little control over the situation. In contrast, attributing rejection to lack of effort (e.g., "I forgot to call" or "I showed up late") may lead to feelings of regret which may motivate the individual to try harder in the future. In this case, the individual has control and the means to change outcomes in future similar situations because she attributed the outcome as being contingent on her own actions (or inactions). In the previous case,

however, the individual viewed the outcome and her actions as noncontingent, thus resulting in a decrease in perceived control.

*Applications of perceived control.* For the past several years, research on the construct of perceived control has flourished, extending to various domains including health (e.g., Smith et al., 2000; Thompson & Collins, 1995), aging (e.g., Lang & Heckhausen, 2001; Reid & Stirling, 1989), clinical (e.g., Fontaine, Manstead, & Wagner, 1993), educational (e.g., Dicintio & Gee, 1999; Hortacsu & Uener, 1993), and occupational contexts (e.g., Bowman & Stern, 1995). Within each of these domains, researchers continue to find benefits in having perceptions of control. For instance, greater perceived control has been associated with better psychological health and well-being (Chipperfield, 1993; Chipperfield & Greenslade, 1999), lower levels of distress (Roussi, 2002; Thompson et al., 1998), successful aging (Schulz & Heckhausen, 1996), lower levels of job strain (Duxbury, Higgins, & Lee, 1994), and better academic development (Dweck, 1975; Perry, Hladkyj, Pekrun, & Pelletier, 2001).

*Primary versus secondary control.* Although perceived control is commonly thought of as active manipulation of the environment, some control theorists (e.g., Rothbaum et al., 1982; Schulz & Heckhausen, 1996) have recognized that individuals also engage in a more passive form of control. In order to differentiate between these two types of control, the labels *primary control* and *secondary control* have been used to reflect active and passive control respectively. Primary control refers to behaviors directed outwardly, whereas secondary control refers to cognitions directed inwardly (Heckhausen & Schulz, 1998). Stated differently, primary control involves external actions and secondary control involves internal adjustments or attempts to “fit in”

(Rothbaum et al., 1982).

Rothbaum et al. (1982) introduced the concept of secondary control as an attempt to distinguish between passive control and a complete lack of control. According to these authors, previous research on uncontrollability (e.g., Miller & Seligman, 1975) only acknowledged primary modes of control and neglected to consider individuals' attempts to fit in with their environment as a valid form of control. Unlike perceived loss of control (i.e., helplessness), Rothbaum et al. argued that when primary control is viewed as unattainable, individuals do not always abandon all efforts to maintain a sense of control. Instead, those individuals may rely on changing their inner thoughts and feelings to adjust to the uncontrollable situation at hand. Thus, instead of viewing perceived control as a unidimensional construct (control versus lack of control), Rothbaum and his colleagues suggest that perceived control be thought of as a dual-process model in which primary and secondary control are often intertwined as individuals negotiate their way through life. From a developmental perspective, primary control is believed to increase until individuals reach middle age, at which time primary control slowly decreases. In contrast, secondary control is believed to develop in middle childhood and increase as individuals age (Schulz and Heckhausen, 1996).

Although clear distinctions between types of secondary control do not exist, some researchers believe that individuals engage in various modes of secondary control. According to Rothbaum et al. (1982) for instance, there are theoretically four main types of secondary control: predictive, illusory, vicarious, and interpretive. Predictive control refers to the ability to predict uncontrollable outcomes and involves the adjustment of one's expectations (e.g., predicting failure to avoid disappointment). Illusory control is

an attempt to associate oneself with chance (e.g., viewing oneself as lucky). Vicarious control involves identifying oneself with powerful others or entities (e.g., belief in or surrendering to a higher power). Interpretive control refers to deriving meaning from uncontrollable experiences in order to gain better understanding and acceptance of them (e.g., belief that everything happens for a reason). Regardless of which specific types of secondary control individuals rely on, it is important to recognize that among each type of secondary control, the common bond is striving to fit in with or adapt to the environment, rather than attempting to change the environment. Like primary control, these modes of secondary control allow individuals to retain a sense of control, even in uncontrollable situations, a markedly different experience from perceptions of helplessness in which individuals experiences a total lack of control (Abramson, Garber, & Seligman, 1980).

Within a social context, primary-control strategies may entail asking someone out on a date, making oneself look as attractive as possible, and smiling at an attractive other. After showing romantic interest in another person, individuals are often left waiting for a response. Secondary control in this context may include vicarious control strategies, such as believing in fate (e.g., “we were destined to fall in love”), or interpretive control strategies, such as minimizing rejection (e.g., “I didn’t really like her anyway”) or believing a relationship failed because something better is going to come along. In these instances, individuals cannot control the outcome (acceptance or rejection by the other person) so they rely on secondary-control strategies in order to retain a sense of control. In this case, relying on secondary control to compensate for a lack of primary control prevents these individuals from experiencing a complete loss of control, often

referred to as helplessness (Rothbaum et al., 1982).

If both primary- and secondary-control strategies are effective in retaining a sense of control, is it more beneficial to engage in one type rather than the other? Most researchers agree that it is optimal for individuals to have access to *both* primary and secondary control, as one type of control is often more effective than the other, depending on the circumstances at hand (Weisz, Rothbaum, & Blackburn, 1984). A balance between primary and secondary control, referred to as optimization, is required to promote long-term outcomes (Heckhausen & Schulz, 1998), where individuals use primary-control strategies to reach their goals and rely on secondary-control strategies if those goals are not initially met. As such, one may assume that primary and secondary control are viewed as equally beneficial to individuals. By its very name, however, primary control seems to be preferable to secondary control. Schulz and Heckhausen (1996) suggest that individuals who can directly influence the environment for the longest period of time are most successful. They further suggest that individuals have an inborn motivation to strive for primary control over secondary control and that the “preference for primary control is a fundamental human universal” (Schulz and Heckhausen, 1999, p. 140). In this respect, secondary control is merely a compensatory mechanism which in the face of failure, allows individuals to regain a sense of control. Thus, secondary control is most likely to occur when attempts at primary control have failed (Rothbaum et al., 1982). For instance, an individual disengaging from prior goals and refocusing on new goals illustrates the compensatory nature of secondary control serving to maintain and protect the motivation of primary control striving against the potential negative effects of failure (Heckhausen & Schulz, 1998).

*Applications of secondary control.* Perhaps, because it is easier to operationalize and because of its assumed preference, primary control has a dominant role in existing control research compared to secondary control. Interestingly, however, researchers have found that secondary control can be at least as important as primary control in some situations. For instance, in the aging domain, researchers have found that secondary control increases with age (Lackovic-Grgin, Grgin, Penezic, & Soric, 2001; Thompson et al., 1998). Moreover, among the aged, primary control is often not a realistic option and older individuals may need to rely on secondary-control strategies instead (Chipperfield, Perry, & Menec, 1999). Consequently, individuals who rely solely on primary control will likely have difficulty dealing with the gradual loss of control that is characteristic of the aging process. In particular, Chipperfield et al. (1999) found that primary-control strategies, although adaptive among young-old individuals (i.e., younger than 80), may actually be detrimental for old-old individuals (i.e., older than 80) and that secondary-control strategies are increasingly adaptive later in life. For instance, lowering one's expectations and accepting personal limitations may be more adaptive than continuous failure at attempting to accomplish the same number of tasks that one was able to complete at a much younger age. Similar to aging individuals, secondary-control strategies are especially adaptive among individuals with certain chronic disabilities (Krantz, 1995). Like the aged, these disabled individuals were likely restricted in their capacity to engage in primary-control strategies. Thus, the benefits of primary over secondary control are not as clear cut as initially believed.

Aside from age differences or physical limitations determining which type of control is more beneficial, cultural differences may also exist. In particular, Azuma

(1984), suggests that some cultures, such as the Japanese, may actually favor secondary control over primary control. For instance, within some cultures, relinquishing control or giving way to another person demonstrates maturity, flexibility, and self-control. In this context, engaging in secondary-control strategies may be superior to engaging in primary-control strategies. Azuma further posits that use of secondary-control strategies, such as acceptance, may be motivated by love and empathy, or by maturity and self-control. Thus, the apparent preference of primary control may largely be a function of the cultural ideologies of Western societies (Grob, 2000; Weisz et al., 1984).

Preference for primary and secondary control may also vary as a function of gender (McConatha & Huba, 1999; Morling & Fiske, 1999; Yoo, 2001). Briefly, traditional feminine qualities, such as empathy and communion, are more conducive to use of secondary control whereas, masculine qualities such as independence and mastery require high levels of primary control. Thus, through various socialization processes, women may be more efficient at using secondary-control strategies and men may be more efficient at using primary-control strategies, at least in situations where traditional gender roles prevail.

In addition to potential aging, gender, and cultural differences, situational contexts may also determine whether individuals prefer to rely on primary- or secondary-control strategies. For example, in certain situations, individuals may prefer to adjust to the situation at hand rather than “rock the boat.” This may be especially true in social situations where individuals may weigh the costs and benefits of acting outwardly versus changing their own perceptions regarding that particular situation. For instance, if a boyfriend does something that annoys his girlfriend, the girlfriend may consider

confronting her boyfriend about his actions and how she feels about them (primary-control strategy). The benefits of this strategy would be that the boyfriend would likely stop engaging in the negative behavior, but the cost may be harm to the relationship. Conversely, the girlfriend may reason that the boyfriend's behavior is really "no big deal" and that she was just overreacting (secondary-control strategy). This secondary-control strategy would prevent the girlfriend from hurting the boyfriend's feelings, although she may still be somewhat bothered by his behavior. In this case, the girlfriend may prefer to engage in the secondary-control strategy because she believes that strategy will have a smaller potential cost to the relationship than would engaging in the primary-control strategy (i.e., confronting the boyfriend about his behavior). Thus, in certain social situations, it is possible that individuals may prefer to rely on secondary rather than primary-control strategies in order to avoid potential negative outcomes.

*Combinations of control.* It is important to note that perceived primary and secondary control are not opposites that exist along a single continuum, rather, they occur along two separate continua. Specifically, while many individuals may rely on secondary control when primary control is not possible, it is also likely that many individuals choose to engage in both primary- and secondary-control strategies in a situation or alternate between the two types of strategies in order to deal with the situation. It is also important to recognize that because they occur along separate continua, it is possible for some individuals to perceive themselves as high in both types of control, high in one type of control and low in the other, or low in both types of control. Ideally, it is thought to be most adaptive for individuals to perceive themselves as having high levels of both types of control, enabling them to use either type of strategy

as needed (Heckhausen & Schulz, 1998; Weisz et al., 1984). In this case, individuals can both actively influence and adjust the way they think about a particular situation. In contrast, individuals who have high levels of primary control but little or no secondary control would only have access to primary control strategies and may experience difficulty if these strategies fail. Conversely, individuals who have low primary control and high secondary control must rely on changing their inner cognitions to deal with situations, as they see themselves as unable to actively influence those situations.

Although having access to only one type of control can be somewhat limiting, it enables those individuals to retain a sense of control, whether it is outward control in influencing the situation or inward control over the way they think about the situation. These individuals have a greater capacity to deal with challenging situations than those individuals who are low in both types of control (unable to directly influence the situation or adjust their way of thinking about the situation), rendering them completely helpless. For the purposes of the current studies, several possible combinations of primary and secondary control (i.e., high primary and secondary, high primary/low secondary, low primary/high secondary, low primary and secondary) will be explored within the context of romantic relationships.

Although individuals may be more motivated to believe they can influence outcomes in their lives rather than simply adjust to them, this preference likely refers to control beliefs, not strategies. That is, individuals may prefer to think they can influence a situation rather than believe they cannot, however, when it comes to choosing which type of strategy to engage in, either primary- or secondary-control strategies may be preferable. Thus, while both contribute to individuals' sense of control, *control beliefs*

refer to the cognition that engaging in a control strategy is possible, whereas *control strategies* refer directly to the action (e.g., influencing the situation or changing one's expectations). These strategies and beliefs are reciprocal in nature in that it is necessary to initially believe that engaging in the strategy is possible before one can use that strategy and actually using that strategy strengthens the belief. The current studies focus on primary and secondary control beliefs as they pertain to individuals' romantic relationships.

*Perceived control within relationships.* Although health and aging researchers often divide perceptions of control into primary and secondary control (e.g., Chipperfield et al., 1999; Lackovic-Grgin et al., 2001), this distinction has been overlooked by researchers examining romantic relationships. In fact, relationship research concerning perceived control often focuses on a completely different type of control than that discussed above. Often referred to as personal or interpersonal control, this alternate type of perceived control refers to control over the relationship, one's partner (i.e., making them do what you want them to do), or relationship decisions (Prince & Arias, 1994; Sistler & Blanchard-Fields, 1993; Stets, 1991; Stets & Hammons, 2002) and has been examined in relation to dating violence, marital conflict, and relationship aggression (Ronfeldt, Kimerling, & Arias, 1998; Stets & Pirog-Good, 1989). This type of control is far from what control theorists such as Rothbaum et al. (1982) and Schulz and Heckhausen (1996) define as perceived control. In fact, interpersonal control has been found to be negatively associated with Rothbaum et al.'s construct of perceived control and with relationship adjustment (Sistler & Blanchard-Fields; Stets, 1993). That is, feeling "out of control" may cause some individuals to try to dominate their partner

(reliance on interpersonal control) in an attempt to regain their own sense of control. Although interpersonal control is not the focus of the current studies, it is important to distinguish between this type of control and the perceived control construct that Rothbaum et al. and Schulz and Heckhausen refer to, namely the subjective capacity to influence or predict outcomes in one's life.

Somewhat more relevant to Rothbaum et al.'s (1982) conceptualization of perceived control is research examining locus of control within relationships (e.g., Lucas & Peterson, 1991; Migeot & Lester, 1996). Again, having an internal locus of control refers to the belief that events or outcomes are generally due to oneself whereas the belief that those events or outcomes are due to something outside of oneself indicates an external locus of control (Rotter, 1966). The locus of control construct is often applied to marital relationships to assess stable, global perceptions of relationship events as internally or externally controlled. Notably, the Miller Marital Locus of Control scale (Miller, Lefcourt, & Ware, 1983) has been used by many researchers to assess individuals' ratings of internal/external locus of control pertaining directly to their marital relationship in combination with marital satisfaction, communication, and provocation among married couples (Husain & Garg, 1985; Smolen & Spiegel, 1987). Studies suggest that having an internal locus of control is associated with more effective communicating and greater marital satisfaction than having an external locus of control (Miller, Lefcourt, Holmes, Ware, & Saleh, 1986). Moreover, researchers have found that partners with a similar locus of control orientation (i.e., both internal or both external) were more satisfied with their relationship compared to partners with different orientations (Camp & Ganong, 1997; Sabatelli, 1986).

Although relationship research pertaining to locus of control is a closer approximation to perceived control (e.g., Rothbaum et al., 1982; Schulz & Heckhausen, 1996) than is research on interpersonal control, the former research only addresses one attributional dimension that influences individuals' perceptions of control. That is, locus of control research focuses on the internal/external attributional dimension and neglects attributions of controllability (i.e., controllable/uncontrollable) and stability (i.e., stable/unstable), both of which may influence individuals' perceptions of control in certain situations. A further limitation of locus of control research is that it assumes that perceptions of control are stable and global within the entire relationship domain. On the contrary, levels of perceived relationship control can fluctuate and may not apply over time or to all situations within that relationship. For instance, an individual may perceive himself as having a high level of control when trying to resolve a relationship problem reasoning that "this argument started because I insulted my partner. I can solve this dispute by apologizing to my partner and trying to make it up to her." The high sense of control may not necessarily generalize to other aspects of the relationship (e.g., "I want my partner to open up to me but I have no idea of how to make that happen"). In this case, the individual has a lower sense of relationship control. Furthermore, in the first example, the individual had a high sense of control over resolving the argument, yet when faced with a different relationship challenge, the individual may feel considerably less control (e.g., "No matter what I say or do I cannot seem to fix this situation"). Thus, perceived relationship control should not be thought of a stable, global cognition. Instead, it is important to acknowledge that perceptions of control within a relationship can fluctuate and may or may not generalize to similar situations within that relationship.

Although several researchers have examined attributions within intimate relationships (e.g., Bradbury & Fincham, 1992; Karney & Bradbury, 2000; Schaefer-Porter & Hendrick, 2000), they have neglected to consider how those attributions influence individuals' perceptions of relationship control. Nor have locus of control researchers explored controllability or stability attributions within relationships. Further, none of these studies has focused on perceived control in terms of responsibility for maintaining a relationship or keeping it satisfying. A dual-process model of perceived relationship control (i.e., primary and secondary control) in terms of taking responsibility for one's own actions in the relationship or putting more effort into relationship maintenance has not been previously examined (e.g., putting more effort into the relationship or changing views of the relationship).

Derived from the dual-process model (i.e., Rothbaum et al., 1982; Schulz & Heckhausen, 1996), the current studies examined perceived control within the context of romantic relationships in order to address the paucity of research in this area. By using this dual-process construct of perceived control, these studies allowed for examination of how relationship attributions relate to both primary and secondary relationship control. For instance, are controllable relationships attributions associated with higher ratings of primary relationship control? Conversely, are uncontrollable attributions associated with a greater reliance on secondary control? It will also be determined whether individuals with higher perceptions of both primary and secondary control are more satisfied and remained in their relationship longer than individuals with high levels of one type of control and low levels of the other or those with low levels of both types of perceived relationship control. Finally, the assumption that levels of perceived control change over

the life span (Heckhausen & Schulz, 1998; Lackovic-Grgin et al., 2001) will be tested in Study 2, in which perceptions of primary and secondary relationship control are examined across a wide range of the adult life span (17-77 years of age).

As previously mentioned, the current studies extend existing research on both relationship attributions and perceived relationship control by exploring the association between individuals' relationship attributions and their perceptions of primary and secondary relationship control. These studies also proceed a step further by assessing individuals' evaluations of their competencies in handling various relationship issues. Specifically, attributions are thought to influence perceptions of control, which in turn, are believed to influence perceived efficacy or judgements of competency to exercise that control (Bandura, 1982). In this sense, the current studies examined not only the links between individuals' relationship attributions and their perceptions of relationship control, but also explored the link between perceived control and perceived relationship efficacy. Perceived efficacy is subsequently discussed in detail.

### *Perceptions of Efficacy*

The concept of self-efficacy, first introduced by Albert Bandura (1977, 1982), refers to the subjective judgment of how well individuals feel they can "execute courses of action required to deal with prospective situations," (p. 122). The construct has since been revised to refer to "people's beliefs about their capabilities to exercise control over events that affect their lives," (Bandura, 1989, p. 1175). Thus, judgments of efficacy are not concerned with the knowledge or skills that one possesses but rather with what one can do with whatever knowledge or skills that one possesses (Maddux, 1995). According to Bandura (1984), self-efficacy is a critical part of our everyday lives in that perceptions

of efficacy produce and regulate events in our lives and, at least to some extent, impact most everything we do. "Among the forms of forethought that affect action, none is more central than judgements of capabilities to deal with different realities," (p. 251).

Bandura (1977) explains that perceived efficacy is an expectation rather than an outcome, as individuals may believe that they have control in a situation but they may also have serious doubts about their ability to successfully deal with that situation. Thus perceived efficacy differs from perceived control in that individuals may believe that outcomes are determined by them (i.e., high perceived control) but may feel inept to adequately or successfully deal with the challenge (low efficacy). Perceived control and efficacy are related, however, in that one must first perceive a situation as at least somewhat controllable in order to perceive oneself as efficacious in that situation. Thus, perceived control is the belief in having (or lacking) control, whereas self-efficacy is the belief in one's capability to adequately exercise that control (Bandura, 1982). Stated differently, perceived control refers to beliefs in contingency whereas perceived efficacy refers to beliefs in competence (Weisz, 1990).

Bandura (1977) suggests that there are several determinants of self-efficacy including past experience, vicarious experience, verbal persuasion, and physiological states. Regarding past experiences, when we experience repeated success in a particular type of situation, our judgements of efficacy in similar situations increase. Conversely, repeated failure in a certain situation will lead to lowered evaluations of efficacy in similar situations. A second determinant of self-efficacy, vicarious experience, operates in a similar manner as the previous determinant in that watching someone else succeed in a situation may cause an individual's own efficacy to increase, whereas watching

someone else fail in a situation may decrease an individual's own feelings of efficacy. Although they operate in a similar manner, vicarious experiences are not as strong a determinant of efficacy as one's own direct experiences. Verbal persuasion is a third determinant of self-efficacy in which individuals may be led to believe that they can succeed through encouragement by others. A common example of verbal persuasion would be a coach providing encouragement to an athlete or a parent coaxing a child to try a new activity. The strength of verbal persuasion as a determinant of self-efficacy depends on the credibility of the persuader (Maddux, 1995). Specifically, the more prestigious, trustworthy, expert, and confident the persuader appears to the individual, the more likely the persuader's verbal encouragement will affect the individual's self-efficacy. A fourth determinant of self-efficacy is an individual's physiological state. For instance, high feelings of stress or anxiety may leave one feeling uneasy and questioning one's competency in a situation. In this case, if individuals are feeling very anxious, they may not believe that they can handle the situation successfully. In contrast, individuals who are feeling relaxed and calm may be more likely to believe that they are competent to deal with the current situation.

An additional source of self-efficacy concerns the cognitive appraisals or causal attributions that individuals make regarding past experiences (Bandura 1977; Weiner, 1972). It is in this context that attribution theory is directly linked to self-efficacy theory. As previously discussed, the causal attributions or explanations we provide for ourselves regarding events and outcomes in our lives can affect our perceptions of control. Similarly, Bandura (1977) points out that those attributions for past outcomes can also influence feelings of self-efficacy. Specifically, past accomplishments ascribed to ability

give one a greater sense of efficacy whereas those accomplishments ascribed to luck give one less efficacy. Past failures, however, are thought to have a different effect on efficacy. That is, past failures attributed to ability (or lack of ability) tend to decrease feelings of efficacy but similar failures attributed to effort (or lack of effort) may leave the individual resolved to put more effort forward in future situations. Thus, causal ascriptions for past successes and failures can influence perceptions of self-efficacy. The reverse may also be true. That is, Bandura (1984, 2001) suggests that judgments of self-efficacy may also partly determine whether failures are motivating or demoralizing whereby individuals who are efficacious are likely to attribute past failure to lack of effort and those individuals who see themselves as inefficacious are more likely to attribute past failures to lack of ability. Therefore, the relationship between causal attributions and judgements of self-efficacy appears to be reciprocal in nature.

According to Bandura (1977), perceptions of efficacy vary along three dimensions: magnitude, generality, and strength. Specifically, individuals may perceive themselves as having a greater magnitude of efficacy in one situation and less efficacy in another situation, so that in the initial situation, they are able to successfully deal with large challenges but in the latter case, they may only be able to succeed at smaller challenges. The generality dimension of efficacy refers to the fact that in some instances, perceived efficacy is specific to one particular type of situation only and in other instances, perceptions of efficacy may extend to include various similar situations. Furthermore, perceptions of efficacy can vary greatly across situations and circumstances and should not be thought of in terms of a global disposition or personality trait (Bandura, 1982; Maddux, 1995). Finally, perceptions of efficacy may differ in strength

where weaker perceptions of efficacy are easily extinguished with one failed attempt, whereas stronger perceptions of efficacy may withstand multiple failure experiences.

Efficacy beliefs influence behavior via various mediating processes, namely goal-setting and persistence, affect, cognition, and selection of environments or activities (Bandura, 1989). Perceived efficacy influences how individuals deal with daily challenges by determining how much effort they will put into a challenge and how long they will persist in the face of obstacles (Bandura, 1977). The stronger the efficacy beliefs, the greater the effort, the longer the persistence, and the lower the negative emotional arousal (e.g., stress, anxiety; Bandura, 1982; Bandura & Adams, 1977). Moreover, perceptions of efficacy determine whether individuals will even attempt to deal with certain situations and largely influence individuals' choices of behavioral settings. Individuals tend to avoid situations in which they feel inefficacious, unable to successfully handle the circumstances surrounding the situations, whereas they tend to be drawn to those situations in which they feel at least somewhat efficacious.

The relation between judgements of efficacy and the challenges individuals face is reciprocal in nature. Specifically, the stronger individuals' perceived efficacy, the more effort they will expend and the longer they will persist, eventually eliminating their doubts regarding the challenge they faced. Thus, those individuals who persist in challenging situations will eventually extinguish subjective threat and increase their efficacy leading them to persist in the face of future threat (Bandura, 1984; Bandura and Adams, 1977). Moreover, in addition to increased persistence in solution seeking, enhanced efficacy also predicts level of cognitive achievement, and intrinsic interest (Bandura, 1984). Conversely, those individuals who quit prematurely will retain self-

doubts and continue to feel inefficacious in similar situations.

*Applications of self-efficacy.* Traditionally, self-efficacy theory has been used to make behavioral changes within the clinical setting. Early efficacy research began with treating anxiety disorders and various phobias (Bandura, 1977). For instance, individuals who had severe snake phobias or agoraphobia were treated via systematic desensitization in which the client faced increasingly difficult snake-related or social-related challenges which gradually increased their sense of efficacy until they were able to face the next challenge, until eventually the disorders became manageable (Bandura & Adams, 1977; Williams & Zane, 1989).

Today, applications of self-efficacy continue within clinical settings, including treatment of addictions (DeWeert van Oene, Breteler, Schippers, & Schrijvers, 2000; Reid, Marini, Sales, & Kampfe, 2001), depression (Smith & Betz, 2002), and anxiety and phobic disorders. Current research also applies self-efficacy theory within the health domain by aiding cardiac patients facing new lifestyle challenges (Plotnikoff & Higginbotham, 1998; Waltz & Badura, 1988) and helping smokers quit (DiClemente, 1986; Froelicher, & Kozuki, 2002). Self-efficacy has also been examined within academic and career development (DeWitz, & Walsh, 2002; Elias & Loomis, 2002; Hargrove, Creagh, & Burgess, 2002). These researchers have found perceptions of self-efficacy to be associated with fewer problems related to drug use, lower levels of depression, successful cessation of smoking, persistence at diet and exercise among cardiac patients, perseverance and resiliency in facing academic and career obstacles, and greater academic performance and satisfaction.

*Self-efficacy within relationships.* As noted by Lopez and Lent (1991), there is a

paucity of research on the application of self-efficacy theory within the context of romantic relationships. Some of the researchers who have explored relationship efficacy have done so indirectly, as in Kelly, Halford, and Young's (2002) study on distressed relationships involving alcohol problems and negative expectations. Their study compared judgements of relationship efficacy among women with distressed relationships, women with alcohol problems, and women in non-distressed relationships. Kelly et al. found that those with both distressed relationships and alcohol problems had lower relationship efficacy than women with only one of the problems or women with neither problem. Other researchers have examined relationship efficacy as a moderator of other relationship factors. For instance, Arias, Lyons, and Street (1997) found that relationship efficacy moderated the effects of victimization on depression among women who were verbally or physically abused.

Although some previous research has applied self-efficacy within the context of romantic relationships, few researchers have examined relationship efficacy as a main component of relationship functioning. An exception is Fincham and Bradbury's (1987) study of the usefulness of attributions and efficacy in dealing with marital conflict. In this study couples were asked to make responsibility attributions regarding the cause of marital conflicts and to rate their own perceived efficacy in resolving conflict within their marriage. Their findings suggest that making controllable, internal attributions for marital conflict positively related to ratings of efficacy, whereas, attributing responsibility for conflict to one's partner was negatively associated with judgments of one's own relationship efficacy.

Other researchers (e.g., Dostal & Langhinrichsen-Rohling, 1997; Lopez & Lent,

1991) have expanded the concept of relationship efficacy by incorporating judgments of efficacy relating to relationship communication, physical intimacy, decision making, and provision of social support. In particular, Lopez and Lent examined self-efficacy as a predictor of relationship adjustment among college students in dating relationships. They found that judgments of relationship self-efficacy were positively associated with relationship adjustment, relationship satisfaction, and expected persistence of the relationship. These findings support Bandura's (1984) notion that higher self-efficacy relates to greater intrinsic interest and persistence.

Dostal and Langhinrichsen-Rohling (1997) adapted Lopez and Lent's (1991) Self-Efficacy Scale to compare efficacy ratings between adult children from divorced homes to those from intact homes. These researchers also created a measure of marital efficacy in order to assess global attitudes towards marriage-specific efficacy in terms of maintaining a happy and long-lasting relationship. Their findings indicate that adult children from intact homes had higher relationship and marital efficacy beliefs than individuals from divorced homes.

The current studies extend previous efficacy research within romantic relationships in several important ways. In Study 1, relationship efficacy is examined as a predictor of relationship satisfaction, both initially and over time. Similar to Lopez and Lent's (1991) study, Study 1 also examines the role of relationship efficacy in predicting relationship longevity over time. The current studies are also used to examine stability of relationship efficacy over time, an aspect not previously examined in this line of research. Stability of relationship efficacy is explored in Study 2, in which efficacy is measured among individuals of varying ages who had experienced different life events

(e.g., marriage, parenting, retirement) to assess possible changes in relationship efficacy over the adult life span.

As in some previous research (e.g., Fincham & Bradbury, 1987; Fincham, Harold, & Gano-Phillips, 2000) both studies explored the associations between individuals' relationship attributions and their judgements of efficacy. In addition, these studies tested the assumed link between relationship perceptions of control and efficacy. Specifically, the current studies explored whether having a sense of primary control was positively associated with a sense of efficacy. Finally, these studies explored the associations between perceived control, efficacy ratings, and a more stable, trait-like construct, namely optimism.

### *Optimism*

The extent to which individuals expect good things to happen to them is referred to as dispositional optimism (Carver & Scheier, 2000), and this individual difference variable represents the power of possibility which can often shape the meaning of individuals' lives (Chang, 2000). Dispositional optimism relates to positive expectations regarding possible outcomes such that optimistic individuals are confident that they will successfully attain their goals (Carver, Reynolds, & Scheier, 1994; Peterson, 2000; Scheier & Carver, 1993). Since Scheier and Carver's (1985) early work with dispositional optimism, it has gained popularity as a personality construct among psychologists who have studied its impact in various contexts, ranging from academic performance to health to aging (e.g., Achat, Kawachi, Spiro, DeMolles, & Sparrow, 2000; Isaacowitz & Seligman, 2002; Lai & Wan, 1996; Lennings, 2000).

Being optimistic can have many positive consequences for individuals through

enhancing physical and psychological well-being, decreasing traumatic distress, and increasing motivation and marital satisfaction (Dougall, Hyman, Hayward, McFeeley, & Baum, 2001; Scheier & Carver, 1987; Taylor & Brown, 1988). Dispositional optimism is also associated with active coping, effective problem solving, resilience in the presence of stressful life events, and increased life satisfaction (Aspinwall, Richter, & Hoffmann, 2000; Chang, 1998; Kao & Tienda, 1995; Peterson, 2000; Scheier & Carver, 1987).

Optimists also tend to attribute their problems to temporary, specific, external causes rather than stable, global, internal causes which is an insidious pattern characteristic of helplessness (and often depression) when failure is involved (Gillham, Shatte, Reivich, & Seligman, 2000). Thus, as demonstrated in the above findings, dispositional optimism is associated with a variety of potential benefits.

*Optimism within relationships.* Although ample optimism research exists within health and aging domains, there is only a limited amount of similar research within the context of romantic relationships. One such study by Boyer-Pennington, Pennington, and Spink (2001) explored individuals' optimism towards their likelihood of getting married and the likelihood that their future marriage would succeed. These researchers found that individuals from intact families were more optimistic about their future marriages than were individuals from single or multiple-divorce families. Similarly, Carnelley and Janoff-Bulman (1992) also found that individuals whose parents had a good relationship with each other tended to be optimistic about getting married. These researchers also found that experiences in previous dating relationships predicted optimism about future romantic relationships. Together, these findings suggest that past relationship experiences (whether personally experienced or vicariously experienced through parental

relationships) may influence optimism ratings regarding possible future relationships.

Another study which illustrates the benefits of having optimistic beliefs about one's romantic relationship was conducted by Murray and Holmes (1997). These researchers found that higher levels of optimism regarding individuals' dating or marital relationships were associated with greater satisfaction, love, and trust, and less conflict and ambivalence within those relationships. Subsequent research by Murray, Holmes, Griffin, Bellavia, and Rose (2001) showed that feeling loved and perceiving one's partner positively was associated with optimism about the future of the relationship. Other research indicates that optimism is positively associated with relationship adjustment (Helgeson, 1994) and marital quality (Fowers, Lyons, & Montel, 1996). Thus, optimism may be either a cause or an effect of experiencing higher levels of satisfaction, love, trust, and marital quality, greater adjustment, and lower levels of conflict and ambivalence in romantic relationships. The current studies examined individuals' dispositional optimism in terms of how it relates to various relationship constructs, including attributions, perceived control, and efficacy. The associations between dispositional optimism and relationship satisfaction and longevity were also explored in order to determine whether a positive outlook contributes to a satisfying and lasting relationship.

## Study 1

### *Overview and Hypotheses*

Study 1 examined the associations among relationship-specific attributions, two types of perceived control (primary and secondary), efficacy, and optimism among individuals in romantic relationships. These constructs were also explored as predictors

of relationship satisfaction and longevity (i.e., whether individuals' relationships were maintained or dissolved). The study was longitudinal in nature with participants initially completing questionnaires measuring their attributions, perceived control, efficacy, and satisfaction towards their relationships and their dispositional optimism (Time 1). Approximately five months later (Time 2), the same participants completed a second questionnaire which determined whether they were still in their relationship and re-assessed the same relationship perceptions as the initial questionnaire.

*Attributions, control, and efficacy.* According to control theory (Rothbaum et al., 1982), individuals who perceive contingency between their own actions and certain outcomes tend to have higher primary control than those who do not perceive contingency. Moreover, this perception of contingency depends on the type of causal attributions made by the individual. Within the context of relationships, if individuals believe that successful relationships are a result of good fortune or depend on fate, they will likely believe they have little influence over outcomes in the relationship. In contrast, if individuals believe that successful relationships are due to hard work and effort, they will likely perceive themselves as having more primary control over outcomes in the relationship. From this basic position and the literature review, the following hypotheses were posited:

*Hypothesis 1a.* It was predicted that controllable relationship attributions would be associated with greater perceptions of primary relationship control.

*Hypothesis 1b.* In contrast to controllable attributions, it was expected that uncontrollable relationship attributions would be associated with lower primary relationship control.

Hypothesis 1c. Based on the assumption that secondary control is especially adaptive when individuals perceive the situation as uncontrollable (i.e., low primary control), it was expected that uncontrollable relationship attributions would be positively associated with secondary relationship control.

Hypothesis 1d. Following the same reasoning as in Hypothesis 1c, controllable relationship attributions were expected to be negatively associated with secondary relationship control.

Hypothesis 1e. Proceeding one step beyond the link between attributions and perceived control, individuals cannot evaluate themselves as efficacious in a situation unless they first perceive themselves as having a certain amount of control over outcomes in that situation (Bandura, 1982). As such, a positive correlation was expected between primary relationship control and evaluations of relationship efficacy, where higher ratings of primary control would be associated with higher ratings of efficacy.

Although no hypotheses were formulated, the relation between secondary relationship control and relationship efficacy was also explored.

*Optimism.* Primary control, efficacy, and optimism have been found to be positively related (Fitzgerald, Tennen, Affleck, & Pransky, 1993; Fontaine et al., 1993), suggesting that the more control individuals believe they have over events, the more efficacy they feel, and the more positively they feel about those events. Thus, the following hypotheses were posited:

Hypothesis 2a. Dispositional optimism was expected to be positively associated with primary relationship control.

Hypothesis 2b. Dispositional optimism was also expected to be positively

correlated with relationship efficacy.

Although no hypothesis were formulated, the relations between dispositional optimism, relationship attributions, and secondary control were also examined.

*Relationship satisfaction.* Based on past research (e.g., Dostal & Langhinrichsen-Rohling, 1997; Fincham et al., 2000; Lopez & Lent, 1991; Miller et al., 1986; Murray & Holmes 1997), relationship-specific controllable attributions, primary control, efficacy, and dispositional optimism were expected to be positively associated with relationship satisfaction, so that higher ratings of controllable attributions, primary control, efficacy, and optimism would be associated with greater relationship satisfaction (see Hypotheses 3a-3d below). Moreover, these relations were expected to be stable over time so that ratings of controllable attributions, primary control, efficacy and optimism at Time 1 should positively predict relationship satisfaction at Time 2.

*Hypothesis 3a.* It was predicted that controllable attributions at Time 1 would be positively associated with Time 1 and Time 2 relationship satisfaction.

*Hypothesis 3b.* A positive relation between primary relationship control at Time 1 and both Time 1 and Time 2 relationship satisfaction was expected.

*Hypothesis 3c.* It was predicted that relationship efficacy at Time 1 would be positively associated with Time 1 and Time 2 relationship satisfaction.

*Hypothesis 3d.* A positive relation was expected between participants' dispositional optimism at Time 1 and their Time 1 and Time 2 relationship satisfaction.

When exploring perceived control as a predictor of relationship satisfaction, it is not enough to consider only primary control because it is possible that some individuals with low primary control are satisfied while others are unsatisfied. A possible reason for

this difference among low primary control individuals is that they differ in levels of secondary control. That is, individuals who have low primary control and high secondary control may not perceived themselves as able to actively influence certain aspects of their relationship to make it more satisfying, but they are able to rely on secondary-control strategies, such as lowering their expectations or accepting the relationship as it is. Conversely, individuals who are low in both primary and secondary control perceive themselves as unable to make the relationship more satisfying and as unable to change the way they think about the relationship to make it more satisfying. Thus, this latter group of individuals is less likely to be satisfied with the relationship than the former group. Thus, the following hypothesis is posed:

*Hypothesis 3e.* Based on the conceptualization that individuals may have one of several combinations of primary and secondary relationship control (i.e., high in both, high in one and low in the other, or low in both), these combinations were compared in terms of their effects on relationship satisfaction. It was hypothesized that individuals who had high levels of both primary and secondary relationship control would have significantly greater relationship satisfaction at both Time 1 and Time 2 than individuals who had low levels of both types of control. Differences between individuals who had low primary/high secondary control and those who had high primary/low secondary control were compared to the high/high and low/low groups in terms of their Time 1 and Time 2 relationship satisfaction.

*Relationship longevity.* Relationship satisfaction is an important determinant of whether a relationship lasts (Shackelford & Buss, 1997). Thus, it is likely that many of the predictors of relationship satisfaction would also predict relationship longevity.

Hypothesis 4a. Based on this reasoning, controllable relationship attributions at Time 1 were expected to positively predict relationship longevity. The effect of making uncontrollable attributions on relationship longevity was also explored.

Hypothesis 4b. Time 1 ratings of primary relationship control were also expected to positively predict relationship longevity.

Hypothesis 4c. Because secondary control is associated with changing one's expectations and acceptance, it was expected that secondary relationship control at Time 1 would predict relationship longevity, so that individuals with higher secondary control at Time 1 would be more likely to still be in that relationship at Time 2 compared to individuals with lower secondary control.

Hypothesis 4d. Like satisfaction, four combinations of primary (low/high) and secondary (low/high) control were compared to assess the effects on relationship longevity. It was predicted that more individuals who were high in both primary and secondary control would still be together at Time 2 than those who were low in both types of relationship control. Individuals with high primary and low secondary and those with low primary and high secondary control were also compared to the high/high and low/low groups to assess any differences in longevity.

Hypothesis 4e. Because perceived efficacy is a determinant of how much effort will be expended and how long individuals will persist in dealing with challenging situations (Bandura, 1977), one may expect that higher efficacy would lead individuals to maintain relationships longer than those with lower efficacy. Relationship efficacy was expected to predict relationship longevity: individuals with higher relationship efficacy at Time 1 were expected to be more likely to still be in the relationship at Time 2

compared to those with lower efficacy at Time 1.

*Hypothesis 4f.* Because positive expectations can give individuals the incentive to persist even in the face of challenges (Peterson, 2000), it was predicted that dispositional optimism at Time 1 would positively predict relationship longevity at Time 2.

*Hypothesis 4g.* Based on past research (e.g., Sternberg, 1986), higher levels of relationship satisfaction were expected to predict relationship longevity. Specifically, individuals who were highly satisfied at Time 1 were expected to be more likely to still be in that relationship at Time 2 compared to individuals who were less satisfied.

*Hypothesis 4h.* Based on similar reasoning, higher levels of love (commitment, passion, and intimacy) were expected to predict relationship longevity, where individuals who perceived their relationship as highly committed, passionate, and intimate at Time 1 were predicted to be more likely to still be in that relationship at Time 2 compared to individuals who saw their relationship as less committed, passionate, and intimate.

## Method

### *Participants*

Initially, 439 Introductory Psychology students (297 women, 140 men, and two participants who did not specify their gender) were recruited to participate in the current study in exchange for experimental credit. After examining the data, one male participant's responses were discarded from subsequent analyses, leaving 438 participants at Time 1.

In order to participate in the study, individuals were required to be involved in an exclusive romantic relationship for a minimum of three months at the time of the study. Individuals were instructed that they were required to participate in both phases of the

study in order to receive full experimental credit. Due to various reasons (e.g., fulfillment of credit requirement, withdrawing from their Introductory Psychology course), however, some attrition did occur, resulting in a loss of 160 (36.5%) participants by Time 2. The remaining 278 participants who completed both phases of the study were 193 women and 85 men. Independent samples t-tests were conducted to determine whether participants who returned for Time 2 of the study differed from those who did not return on any of the relationship perception measures at Time 1. The only significant difference found was for Time 1 relationship efficacy, where participants who returned at Time 2 had higher levels of relationship efficacy ( $M = 69.72$ ) than those who did not return ( $M = 67.43$ ),  $t(325) = 2.02, p < .05$ .

### *Procedure*

The study took place in two phases. The first phase (Time 1) consisted of an initial data collection early in the academic year (i.e., the end of September). At this time, sessions consisting of approximately 25-50 participants were conducted. During their session, participants completed a questionnaire consisting of measures of demographics, relationship attributions, primary and secondary relationship control, relationship efficacy, dispositional optimism, relationship satisfaction, and ratings of relationship passion, intimacy, and commitment.

The second phase of the study (Time 2) consisted of a second data collection in which the same participants from Time 1 completed a second questionnaire five months later (i.e., end of February). The same measures as Time 1 were re-assessed in the Time 2 questionnaire. In addition, the latter questionnaire included initial questions to determine whether participants were still in the same relationship as they were in at Time

1 and if so, participants were asked to respond to subsequent questions referring to that particular relationship. If they were no longer in the same relationship, participants were asked to respond to subsequent questions in retrospect of the ended relationship.

#### *Time 1 Measures*

*Demographics.* (Appendix I). Participants were asked a number of demographic-type questions, including how long they have been in their current relationship, whether they had ever been in a serious relationship prior to their current relationship, their age, their gender, and whether they lived at home with their parents. Participants were also asked about their parents' marital status and whether they thought their parents had a good relationship. Participants then rated how strong their religious beliefs were on a 7-point scale ranging from 1 (*not strong*) through 7 (*very strong*).

In addition, because perceptions of control may vary due to cultural differences (Grob, 2000; Weisz et al., 1984), participants were asked whether they considered English to be their first language, whether they were born in Canada, whether their parents were born in Canada, and which of several ethnic backgrounds they identified with most (i.e., European/Caucasian, Aboriginal North American, East Indian, Asian, Polynesian, Middle Eastern, African, Central American, South American, or Australian).

*Relationship attributions.* (Appendix II). Based on attribution theory (Weiner, 1985), 10 Likert-style items were used to measure participants' relationship attributions. Participants were instructed to read each statement carefully and respond to it by expressing the extent to which they believed the statement applied to them and their relationship. Six items fall within the *controllable* attribution domain and include both internal and external attributions. An example of a controllable, internal relationship

attribution is “If I want this relationship to last, I will have to put effort into making it last,” with responses ranging from 1 (*strongly disagree*) through 7 (*strongly agree*). An example of a controllable, external attribution is “How much effort my partner puts into this relationship will determine how successful it is.”

Four additional items were used to assess *uncontrollable* relationship attributions which also include both internal and external attributions. For instance, “Luck will determine whether this relationship lasts,” is an example of an uncontrollable, external attribution and “If this relationship fails it is because I’m just not good at having relationships,” is an example of an uncontrollable internal attribution. Again, responses ranged from 1 (*strongly disagree*) through 7 (*strongly agree*).

*Primary relationship control.* Participants’ perceptions of primary control in their relationships were assessed using a 14-item Likert-style scale with responses ranging from 1 (*strongly disagree*) through 7 (*strongly agree*). Based on control theory (Rothbaum et al., 1982; Schulz & Heckhausen 1996), an example of the Primary Relationship Control (PRC) scale is “I have a great deal of influence over the success of this relationship,” (see Appendix III for list of items). Half of the items are worded so that low scores indicate high perceived control (e.g., “Much of what happens in the relationship is beyond my control”). For these items, the responses were reverse coded and then responses to all items were summed so that higher scores reflect greater relationship primary control.

*Secondary relationship control.* (Appendix IV). Based on Rothbaum et al.’s (1982) conceptualization of secondary control, a 14-item measure was created to assess participants’ perceived secondary control in their romantic relationships. The Secondary

Relationship Control (SRC) scale is a 7-point Likert-style scale with responses ranging from 1 (*strongly disagree*) through 7 (*strongly agree*). An example of an item from the SRC scale is “Accepting the fact that no relationship is perfect makes this relationship more satisfying.” Responses to all items were summed so that higher scores reflect greater relationship secondary control. As part of a pilot study, the internal reliability of the RSC scale was assessed and results revealed an alpha of .64 for all 14 items. Based on a factor analysis of all 14 items and on conceptual reasoning, four items were subsequently dropped from the scale.

*Relationship efficacy.* (Appendix V). Relationship efficacy was assessed using a 14-item Likert-style scale which is based on self-efficacy theory (Bandura, 1977) and partially on Sherer and Maddux’s (1982) General Self-efficacy sub-scale. An example of an item from the Relationship Efficacy (RE) scale is “When I make plans regarding this relationship, I am certain I can make them work,” with responses ranging from 1 (*strongly disagree*) through 7 (*strongly agree*). Eight of the items are worded so that low scores indicate higher efficacy (e.g., “When difficulties come up in this relationship, I avoid facing them”). For these items, responses were reverse coded and then responses to all items were summed so that higher scores reflect greater perceptions of efficacy.

*Optimism.* Scheier, Carver, and Bridges’s (1994) Revised Life Orientation Test (LOT-R) was used to measure participants’ dispositional optimism. The LOT-R is a six-item Likert-style measure which has been used to assess the role of optimism in a variety of domains such as health, academic, and occupational settings (Chang & Bridewell, 1998; Creed, Patton, & Bartrum, 2002; Fontaine & Cheskin, 1999; Stoecker, 1999). Three of the items of the LOT-R are worded in a positive way (e.g., “In uncertain times I

usually expect the best”) and three of the items are worded in a negative way (e.g., “I hardly ever expect things to go my way”), with responses ranging from 1 (*strongly disagree*) through 7 (*strongly agree*). Responses for the negative items were reverse-coded and then scores on all items were summed so that high scores reflect high levels of optimism and low scores reflect low levels of optimism.

*Relationship satisfaction.* Participants’ satisfaction with their relationship was measured using Hendrick’s (1988) 7-item Relationship Assessment Scale (RAS). It includes items such as “How well does your partner meet your needs?” and “How much do you love your partner,” with responses ranging from 1 (*not much*) through 7 (*very much*). The RAS is highly correlated with Spanier’s (1976) Dyadic Adjustment Scale (DAS), a well established measure of relationship quality (Hendrick & Hendrick, 1997), and is often used by researchers to assess satisfaction in intimate relationships (Vera & Betz, 1992; Siavelis & Lamke, 1992 ; Sacher & Fine, 1996).

*Commitment, passion, and intimacy.* The three components of love, commitment, passion, and intimacy, were measured using Sternberg’s (1997) Triangular Love Scale. The Triangular Love Scale is comprised of 36 items measured by nine-point Likert-type scales with responses ranging from 1 (*not at all*) through 7 (*extremely*). Concerning commitment, or determination to stay in the relationship, participants responded to questions such as “I will always feel a strong responsibility for my partner.” Passion is the drive or sexual attraction in a relationship and includes items such as “I find my partner very physically attractive.” Intimacy is the bond or connected feeling between partners in a relationship and includes items such as “I have a warm and comfortable relationship with my partner.” Items for each of the three sub-scales were summed so

that higher scores indicated greater commitment, passion, or intimacy.

### *Time 2 Measures*

Each of the above measures of demographics, relationship attributions, primary and secondary relationship control, relationship efficacy, optimism, relationship satisfaction, and love components were reassessed at Time 2. In addition, participants were also asked about the longevity of their romantic relationships.

*Relationship longevity.* At the beginning of the Time 2 questionnaire, participants were asked if they were still in the same relationship as they were at Time 1. If they responded “yes” to this initial question, they were asked to respond to the rest of the questionnaire by referring to that same romantic relationship. Participants who had ended their relationship were asked to respond to the rest of the questionnaire in retrospect of the ended relationship.

## Results

### *Time 1*

*Demographics.* At Time 1, participants ranged in age from 17.5 years to older than 21.5 years, with the average age being 19 years, seven months. The majority (65.1%) of participants ( $n = 285$ ) still lived at home with their parents, 142 (32.4%) did not, and 11 (2.5%) participants did not indicate whether or not they lived with their parents. Most participants ( $n = 390$ , 89%) indicated that English was their first language. Most participants ( $n = 318$ , 72.6%) indicated that their parents were born in Canada, 119 (27.2%) indicated that their parents were not born in Canada, and one participant (0.20%) did not indicate parents’ birth place. The majority of participants ( $n = 379$ , 86.5%) indicated that they were born in Canada, 57 (13%) indicated that they

were not born in Canada, and two (0.50%) participants did not indicate whether or not they were born in Canada. Regarding ethnicity, most participants ( $n = 351$ , 80.2%) identified with European/Caucasian descent, 14 (3.2%) were Aboriginal North American, 9 (2.1%) were East Indian, 47 (10.7%) were Asian, 5 (1.1%) were African, 5 (1.1%) were Central American, 4 (0.9%) were South American, 1 (0.2%) was Australian, and 2 (0.5%) did not respond. The strength of participants' religious beliefs ranged from 1 "not strong" through 7 "very strong", ( $M = 3.74$ ,  $SD = 1.97$ ).

Participants' romantic relationships ranged in length from three months to more than four years, with the average being approximately 18 months. When asked if they had ever been in a serious relationship prior to their current relationship, 197 (45%) participants said "yes" and 241 (55%) participants said "no". When asked about their parents' marital status, 334 (76.3%) participants indicated that their parents were married, 64 (14.6%) participants had divorced parents, 13 (3%) had separated parents, and 27 (6.2%) participants indicated "other" (e.g., parents were deceased, never married, etc.). Among participants whose parents were currently married, 290 (81.97%) indicated that their parents had a good relationship, 38 (10.7%) said their parents did not have a good relationship, and 22 (6.2%) participants did not respond.

*Relationship perceptions.* See Table 1.1 for descriptive statistics of all measures, and the alpha reliabilities and test-retest reliabilities of the new relationship attributions, primary and secondary relationship control, and relationship efficacy scales. In general, participants saw various aspects of their relationship as largely controllable (i.e., mean ratings of controllable attributions above the midpoint) rather than uncontrollable (i.e., mean ratings of uncontrollable attributions below the midpoint). Participants rated

themselves as high in primary relationship control and efficacy, perceiving themselves as having a great deal of influence over relationship outcomes and as being competent in dealing with relationship issues. They were optimistic and rated their current relationships as satisfying, and highly passionate, intimate, and committed.

Based on the strong correlations between the three love components, namely, passion, intimacy, and commitment (mean  $r = .80$ ), they were combined into a single measure of love for all subsequent analyses.

*Gender differences.* Several independent samples  $t$ -tests were conducted to determine whether men and women differed in their Time 1 relationship perceptions (Table 1.2). A significant gender difference was found for controllable relationship attributions, where compared to women, men made more controllable attributions for their relationships. A significant gender difference was also found for love: women reported that their relationships were more loving than men reported. Marginal gender differences were also found for secondary relationship control and satisfaction where women rated themselves as slightly lower on secondary control and their relationship as slightly more satisfying than did men. No gender differences were found for primary relationship control, efficacy, or optimism.

*Ethnicity differences.* Independent samples  $t$ -tests were conducted to determine whether ethnicity differences existed for Time 1 relationship perceptions. Because the majority of participants identified themselves as European/Caucasian, ethnicity differences were assessed by comparing European/Caucasian participants to non-European/Caucasian participants (Table 1.3). A significant ethnicity difference was found for uncontrollable attributions where non-European/Caucasians made more

uncontrollable attributions towards their relationship than did European/Caucasians. Ethnicity differences were also found for primary and secondary relationship control: European/Caucasians reported more primary and less secondary control compared to their non-European/Caucasian counterparts.

*Correlations.* Bivariate correlations between all study variables were initially computed for all participants together (see Table 1.4), then re-computed separately for each gender (see Table 1.5). Gender differences in correlations were analyzed using Fisher's z-test. A significant gender difference was found for the correlation between controllable attributions and relationship satisfaction. In fact, these correlations were in opposite directions for men and women: making more controllable attributions was associated with greater satisfaction among men ( $r = .11, ns$ ), yet for women, making more controllable attributions was associated with less satisfaction in the relationship ( $r = -.17, p < .01$ ),  $z = 2.71, p < .01$ . A similar significant gender difference was found for the correlation between controllable attributions and love, where greater controllable attributions were associated with greater love among men ( $r = .19, p < .05$ ), but less love among women ( $r = -.12, p < .05$ ),  $z = 2.99, p < .01$ .

Regarding uncontrollable attributions, gender differences were found for the correlations with optimism, satisfaction and love, but the correlations were in the same direction for both genders. Specifically, uncontrollable attributions were more negatively correlated with optimism for men ( $r = -.34, p < .001$ ) compared to women ( $r = -.11, ns$ ),  $z = -2.42, p < .05$ . Similarly, uncontrollable attributions were also more negatively correlated with satisfaction for men ( $r = -.49, p < .001$ ) compared to women ( $r = -.17, p < .01$ ),  $z = -3.49, p < .001$ . Also, uncontrollable attributions were more negatively

correlated with love for men ( $r = -.35, p < .001$ ) compared to women ( $r = -.17, p < .01$ ),  $z = -2.22, p < .05$ . Finally, compared to women, men's optimism was more positively correlated with their relationship satisfaction ( $r = .15, p < .05$  for women and  $r = .35, p < .001$  for men),  $z = 2.02, p < .05$ .

Although the direction of the correlations was the same for both genders, compared to women, men's primary control was more negatively correlated with their uncontrollable attributions ( $r = -.17, p < .05$  for women and  $r = -.42, p < .001$  for men),  $z = -2.61, p < .01$ . Likewise, compared to women, primary control for men was more positively associated with their relationship efficacy ( $r = .13, p < .05$  for women and  $r = .41, p < .001$  for men),  $z = 2.77, p < .01$ . Compared to women, men's primary control was also more strongly correlated with their optimism ( $r = -.05, ns$  for women and  $r = .39, p < .001$  for men),  $z = 3.37, p < .001$ . Finally, men's (compared to women's) primary control was more positively correlated with their relationship satisfaction ( $r = .16, p < .05$  for women and  $r = .40, p < .001$  for men),  $z = 2.43, p < .05$ .

Other gender differences were found for correlations with efficacy. While women's relationship efficacy *negatively* correlated with controllable attributions ( $r = -.16, p < .001$ ), men's efficacy *positively* correlated with their controllable attributions ( $r = .18, p < .05$ ). More controllable attributions were associated with less relationship efficacy for women but more efficacy for men and this gender difference was found to be significant,  $z = 3.21, p < .01$ . A significant gender difference was also found for the correlation between efficacy and uncontrollable attributions. Although the correlation was negative for both genders, men's relationship efficacy was more strongly related to uncontrollable attributions ( $r = -.50, p < .001$ ) than was women's relationship efficacy ( $r$

=  $-.30, p < .001$ ),  $z = -2.23, p < .05$ .

*Relationship Attributions, Control, and Efficacy*

*Hypothesis 1a.* As predicted, controllable relationship attributions were positively correlated with primary relationship control ( $r = .26, p < .001$ ), so that the more controllable attributions participants made towards their relationship, the more control they felt they had over relationship outcomes.

*Hypothesis 1b.* Unlike controllable attributions, uncontrollable attributions were expected to negatively correlate with primary relationship control. This hypothesis was supported ( $r = -.26, p < .001$ ), indicating that making fewer uncontrollable attributions was associated with greater perceptions of primary control in the relationship.

*Hypothesis 1c.* As expected, secondary control was positively correlated with uncontrollable attributions ( $r = .40, p < .001$ ), suggesting that secondary control may be more heavily relied upon when a situation is perceived as uncontrollable.

*Hypothesis 1d.* Surprisingly, secondary control was positively (not negatively) related to controllable attributions ( $r = .28, p < .001$ ). Thus, Hypothesis 1d was not supported.

*Hypothesis 1e.* As predicted, participants' primary control was positively correlated with relationship efficacy ( $r = .23, p < .001$ ), so that the more influence individuals felt they had in the relationship, the more competent they felt in dealing with various relationship challenges.

To summarize, with the exception of Hypothesis 1d, the expected associations among relationship attributions, primary and secondary control, and efficacy (as stated in Hypotheses 1a through 1e) were supported. Interestingly, although no hypothesis was

formulated, it was found that secondary control was negatively correlated with relationship efficacy ( $r = -.19, p < .001$ ), where higher ratings of secondary control were associated with less perceived efficacy in the relationship.

### *Optimism*

*Hypothesis 2a.* Based on past findings (e.g., Fitzgerald et al., 1993), dispositional optimism was expected to positively correlate with primary relationship control. This hypothesis was supported, ( $r = .11, p < .05$ ).

*Hypothesis 2b.* As predicted, dispositional optimism was also positively correlated with relationship efficacy. Greater dispositional optimism was associated with higher levels of efficacy in the relationship, ( $r = .30, p < .001$ ).

Although no hypotheses were formulated, the relations between optimism and relationship attributions and secondary relationship control were also examined. Optimism was not significantly related to controllable attributions but was associated with lower levels of uncontrollable attributions ( $r = -.19, p < .001$ ). Finally, lower levels of optimism were associated with greater secondary control ( $r = -.14, p < .001$ ).

### *Relationship Satisfaction*

*Hypothesis 3a.* It was expected that controllable attributions would be positively associated with relationship satisfaction at Time 1. A non-significant correlation ( $r = -.09$ ) indicated that this hypothesis was not supported. Although not hypothesized, uncontrollable attributions were negatively associated with relationship satisfaction ( $r = -.29, p < .001$ ): the more uncontrollable attributions made, the less satisfying participants saw their relationships.

*Hypothesis 3b.* Primary relationship control positively correlated with

relationship satisfaction ( $r = .24, p < .001$ ). The more influence participants felt they had, the more satisfying they rated their relationships.

Although not hypothesized, secondary control was negatively correlated with relationship satisfaction ( $r = -.22, p < .001$ ) indicating that greater secondary control was associated with less satisfying relationships.

*Hypothesis 3c.* As predicted efficacy was positively correlated with relationship satisfaction ( $r = .53, p < .001$ ), so that the more competent participants felt in their relationship, the more satisfying they rated their relationship.

*Hypotheses 3d.* As expected, higher levels of optimism were associated with greater relationship satisfaction ( $r = .21, p < .001$ ).

Not surprisingly, participants' ratings of satisfaction and love in the relationship were strongly correlated ( $r = .80, p < .001$ ). Moreover, participants' relationship perceptions correlated with ratings of love in a similar manner to the above correlations with satisfaction (see Table 1.4 for relevant correlations). Specifically, uncontrollable attributions and secondary control were negatively associated with ratings of love. Conversely, primary control, efficacy, and dispositional optimism were positively associated with participants' love ratings. Finally, length of relationship was associated with greater love ( $r = .15, p < .01$ ), so that the longer participants were in their relationships, the more love they felt in their relationship.

*Predicting relationship satisfaction.* Multiple linear regression analyses were used to examine Time 1 demographics (i.e., age, length of relationship, gender, religious beliefs, and ethnicity), optimism, and relationship perceptions (i.e., controllable and uncontrollable attributions, primary and secondary control, and efficacy) as predictors of

Time 1 relationship satisfaction (Table 1.6). Participants' demographics were entered in Step 1 of the model and their optimism and relationship perceptions were then entered in Step 2 in order to determine if they predicted relationship satisfaction once potential differences due to demographics were accounted for (Tabachnick & Fidell, 2001). None of the demographic variables in Step 1 predicted relationship satisfaction,  $R^2 = .009$ ,  $F(5, 366) = 0.67$ , *ns*. In Step 2,  $R^2$  significantly increased to .288,  $F(11, 360) = 13.24$ ,  $p < .001$ , indicating that participants' relationship perceptions significantly predicted their satisfaction with the relationship, regardless of demographic differences. Specifically, primary relationship control ( $\beta = .139$ ,  $p < .01$ ) and efficacy ( $\beta = .437$ ,  $p < .001$ ) predicted relationship satisfaction, suggesting that the more influence individuals felt they had and the more competent they felt in handling relationship issues, the more satisfaction they felt, providing further support for Hypotheses 3b and 3c.

*Hypothesis 3e.* In order to examine the impact of the four combinations of primary and secondary control (high/high, high/low, low/high, low/low) on participants' Time 1 relationship satisfaction, participants were categorized as either low or high on primary control and low or high on secondary control based on an extreme split analyses (i.e., dropped middle third of the distribution). Then, a Primary Control (low/high) x Secondary Control (low/high) x Gender (female/male) 2 x 2 x 2 factorial design was conducted with Time 1 satisfaction as the dependent measure.

A significant main effect was found for primary control on Time 1 relationship satisfaction, where individuals with high primary relationship control were more satisfied with their relationship ( $M = 41.18$ ) than were their low primary control counterparts ( $M = 39.16$ ),  $F(1, 196) = 6.42$ ,  $p < .05$ . A significant main effect was also

found for secondary relationship control on Time 1 satisfaction, but in the opposite direction. Specifically, individuals with high secondary control were less satisfied with their relationship ( $M = 37.97$ ) than individuals with low secondary control ( $M = 42.58$ ),  $F(1, 196) = 13.83, p < .001$ . Contrary to Hypothesis 3f, there was no interaction effect between primary and secondary control on Time 1 satisfaction. There was, however, a significant primary control by gender interaction,  $F(1, 196) = 6.06, p < .05$ , which prompted a re-analysis of the effects of primary and secondary relationship control on satisfaction separately for each gender.

Consequently, 2 (low/high primary control) x 2 (low/high secondary control) ANOVAs with satisfaction as the dependent measures were rerun separately for men and women. Among men, only primary control had a significant effect on their Time 1 satisfaction: those men with high primary control were more satisfied than men with low primary control ( $M = 42.16$  vs.  $36.51$ , respectively),  $F(1, 70) = 10.31, p < .01$ . Among women, however, this effect was not significant, yet secondary control had a main effect on relationship satisfaction, where those women with low secondary control were more satisfied than their high-control counterparts ( $M = 43.00$  vs.  $37.83$ , respectively),  $F(1, 126) = 18.72, p < .001$ . Thus, it appears that relationship satisfaction is associated with high primary control for men and low secondary control for women.

*Predicting love.* Similar to relationship satisfaction, a multiple linear regression analysis was used to examine Time 1 demographics (i.e., age, length of relationship, gender, religious beliefs, and ethnicity), optimism, and relationship perceptions (i.e., controllable and uncontrollable attributions, primary and secondary control, efficacy) as predictors of Time 1 relationship love (Table 1.7). Initially, gender ( $\beta = -.126, p < .05$ )

and length of relationship ( $\beta = .154$ ,  $p < .01$ ) predicted love in Step 1 of the model, where being female and in a longer relationship was associated with greater love in the relationship. In Step 2,  $R^2$  significantly increased from .048 to .317,  $F(11, 343) = 14.47$ ,  $p < .001$ , indicating that participants' relationship perceptions significantly predicted their relationship love. When optimism and relationship perceptions were added to the regression model in Step 2, gender and length of relationship remained significant predictors of love ( $\beta = -.100$ ,  $p < .05$  for gender and  $\beta = .154$ ,  $p < .01$  for length of relationship, respectively). Among relationship perceptions, only efficacy ( $\beta = .296$ ,  $p < .001$ ) significantly predicted relationship love, suggesting that the more competent participants felt in handling relationship issues, the more love they reported in their relationship. Recall, efficacy was also a significant predictor of relationship satisfaction.

The impact of the four combinations of primary and secondary control (high/high, high/low, low/high, low/low) on participants' Time 1 relationship love was assessed using a Primary Control (low/high) x Secondary Control (low/high) x Gender (female/male) 2 x 2 x 2 factorial design with Time 1 love as the dependent measure.

A significant main effect was found for secondary control on Time 1 relationship love, where, individuals with high secondary control reported less loving relationships ( $M = 196.08$ ) than individuals with low secondary control ( $M = 213.97$ ),  $F(1, 186) = 7.68$ ,  $p < .01$ . This result is consistent with the main effect for secondary control on satisfaction. Thus, greater secondary control is associated with less loving and less satisfying relationships. No other main or interaction effects were found for Time 1 love.

### *Time 2*

*Demographics.* Of the 278 participants who returned to complete the second half

of Study 1 (i.e., Time 2), 209 (75%) were still in their relationship from Time 1 (149 women and 60 men). The remaining 69 (25%) participants who returned for Time 2 of the study were no longer in their relationship (44 women and 25 men).

*Relationship perceptions.* Because the Time 2 relationship perceptions of participants who were no longer in their relationship might be negatively biased, only the responses of those participants still in the same relationship at Time 2 were included in subsequent analyses (with the exception of analyses involving relationship longevity). In general, relationship perceptions at Time 2 were similar to Time 1 perceptions. That is, they had fairly high levels of primary relationship control and relationship efficacy, were quite optimistic, and rated their current relationships as satisfying and loving. For a comparison of Time 1 and 2 relationship perceptions, see Table 1.1 for descriptive statistics, internal consistencies and test-retest reliabilities.

*Gender differences.* The only marginally significant gender difference found at Time 2 was for love. Similar to Time 1 perceptions, women rated their relationship as slightly more loving than men did (see Table 1.2). Other gender differences in relationship perceptions found at Time 1 (i.e., controllable attributions, secondary control, and satisfaction) were not significant at Time 2.

*Ethnicity differences.* Similar to Time 1, ethnicity differences were again found for relationship primary control, secondary control, and uncontrollable attributions at Time 2. European/Caucasians reported more primary and less secondary relationship control and made fewer uncontrollable attributions compared to their non-European/Caucasian counterparts (see Table 1.3). There were no other ethnicity differences found at Time 2.

*Correlations.* Bivariate correlations among Time 2 relationship perceptions were consistent with Time 1 correlations (see Table 1.8).

### *Relationship Longevity*

The main objective of collecting Time 2 data was to determine whether participants were still in their relationships and whether Time 1 relationship perceptions predicted relationship longevity. A logistic regression analysis was conducted in order to examine participants' Time 1 demographics, relationship perceptions (controllable attributions, uncontrollable attributions, primary control, secondary control, efficacy, satisfaction, and love), and optimism as predictors of relationship longevity (i.e., whether participants were still in the relationship at Time 2). A test of the full model with all 13 predictors against a constant-only model was statistically reliable,  $\chi^2(13, 237) = 61.35, p < .001$ , indicating that the set of predictors reliability distinguished between maintained and ended relationships. Moreover, predictive success was adequate with 35% of ended relationship and 95% of maintained relationships correctly predicted for an overall success rate of 80%.

See Table 1.9 for regression coefficients, Wald statistics, odds ratios, and 95% confidence intervals for each predictor. Not surprisingly, length of relationship significantly predicted relationship longevity, where individuals who were in longer relationships at Time 1 were more likely to still be in their relationship at Time 2 compared to individuals in shorter relationships,  $z = 9.04, p < .01$ . Secondary relationship control also significantly predicted relationship longevity, where individuals with higher secondary control at Time 1 were more likely to have ended their relationship by Time 2 compared to individuals with lower secondary control,  $z = 6.37, p$

< .05. Ratings of love in the relationship at Time 1 also significantly predicted relationship longevity at Time 2,  $z = 5.82$ ,  $p < .05$ . Specifically, participants who had higher ratings of love were more likely to still be in the relationship at Time 2 compared to participants who had lower ratings of love.

In order to examine the effect of each relationship perception on relationship longevity separately, participants were split into two categories: those who were still in the relationship at Time 2 and those who were no longer in the relationship at Time 2. Independent samples t-tests were then used to compare the two groups on Time 1 relationship perceptions in order to determine whether any mean differences existed. A significant mean difference was found for secondary control where participants who had maintained their relationship (compared to those whose relationships had ended) had lower secondary control at Time 1 (see Table 1.10). Significant differences were also found for efficacy, satisfaction and love. Compared to those who were no longer in their relationship at Time 2, participants who were still in their relationship had higher levels of Time 1 relationship efficacy, satisfaction, and love. No differences were found for relationship attributions, primary control, or dispositional optimism.

Below is a summary of the relationship longevity results for Hypotheses 4a - 4h.

*Hypothesis 4a.* Controllable attributions at Time 1 were expected to positively predict relationship longevity. This hypothesis was not supported. Uncontrollable attributions also failed to predict longevity.

*Hypothesis 4b.* Contrary to hypothesis 4b, Time 1 ratings of primary relationship control did not predict relationship longevity at Time 2.

*Hypothesis 4c.* Interestingly, results for secondary control were opposite of what

was predicted in Hypothesis 4c. It was expected that secondary control would positively predict relationship longevity. Conversely, secondary control was found to negatively predict longevity, both in the logistic regression analyses and in the *t*-tests. That is, in the regression analysis, greater secondary control at Time 1 predicted ended relationships at Time 2 and *t*-tests revealed that participants who had ended their relationship at Time 2 had higher Time 1 ratings of secondary control than did participants who were still in their relationship at Time 2.

*Hypothesis 4d.* Similar to satisfaction, four (low/high) combinations of Time 1 primary and secondary control were compared to assess the effects on relationship longevity at Time 2. It was predicted that more individuals high in both primary and secondary control would still be together at Time 2 than individuals who were low in both types of relationship control. This hypothesis was not supported. Surprisingly, only 58.6% of participants with high primary/high secondary control perceptions were still in their relationship at Time 2 compared to 92.3% of participants with low primary/low secondary control whose relationships were maintained. Among participants who were categorized as having high primary/low secondary control perceptions, 90.9% were still in their relationship at Time 2 and among low primary/high secondary control participants, 61% were still in the relationship. Thus, not only was Hypothesis 4d not supported, but the group expected to have the highest frequency of intact relationships (i.e., those individuals with high primary/high secondary control) actually had the lowest frequency of intact relationships.

*Hypothesis 4e.* Relationship efficacy was expected to positively predict relationship longevity. This hypothesis was partially supported in that compared to

participants whose relationships had ended, participants who were still in the relationship at Time 2 had higher levels of relationship efficacy at Time 1. However, efficacy was not a significant predictor of longevity in the regression model when all other relationship perceptions were included in the model.

*Hypothesis 4f.* This hypothesis was not supported. Dispositional optimism at Time 1 did not predict whether participants were still in their relationship at Time 2, nor did these two groups differ in Time 1 ratings of dispositional optimism.

*Hypothesis 4g.* Consistent with past research (e.g., Sternberg, 1986) and Hypothesis 4g, relationship satisfaction predicted longevity. Participants who were still in the relationship at Time 2 had greater relationship satisfaction at Time 1 than did those who had ended their relationships. When entered into the regression model, however, satisfaction did not significantly predict longevity.

*Hypothesis 4h.* This hypothesis was confirmed in that higher levels of Time 1 love (commitment, passion, and intimacy) predicted relationship longevity at Time 2. Individuals who perceive their relationship as highly loving were more likely to still be in that relationship compared to individuals who viewed their relationship as less loving.

*Predicting Time 2 relationship satisfaction.* After identifying participants who were still in their relationships and predictors of relationship longevity, the next objective was to explore predictors of relationships satisfaction among participants who were still in their relationships at Time 2. Multiple linear regression analyses were used to examine Time 1 demographics (i.e., age, length of relationship, gender, religious beliefs, and ethnicity), relationship perceptions (i.e., controllable and uncontrollable attributions, primary and secondary control, and efficacy), and optimism as predictors of

Time 2 relationship satisfaction (Table 1.11). Similar to predicting Time 1 satisfaction, participants' demographics were again entered in Step 1 of the model and their optimism and relationship perceptions were then entered in Step 2, with Time 2 relationship satisfaction as the criterion variable. Consistent with Time 1 satisfaction, none of the demographic variables in Step 1 predicted Time 2 relationship satisfaction,  $R^2 = .01$ ,  $F(5, 179) = 0.34$ , *ns*. In Step 2,  $R^2$  significantly increased to .23,  $F(11, 173) = 4.56$ ,  $p < .001$ , indicating that participants' Time 1 relationship perceptions significantly predicted their Time 2 satisfaction with that relationship, regardless of demographic differences.

Specifically, similar to Time 1 relationship satisfaction, relationship efficacy ( $\beta = .355$ ,  $p < .001$ ) again predicted relationship satisfaction at Time 2. Unlike Time 1 satisfaction, however, secondary control negatively predicted Time 2 relationship satisfaction ( $\beta = -.258$ ,  $p < .01$ ), suggesting that greater secondary control at Time 1 was associated with lower satisfaction at Time 2. Although primary control predicted Time 1 satisfaction, it did not predict Time 2 satisfaction. In Step 3, Time 1 satisfaction was included as a covariate in the model,  $R^2 = .456$ ,  $p < .001$ . Relationship efficacy remained a significant predictor of Time 2 satisfaction ( $\beta = .163$ ,  $p < .05$ ), and secondary control was still marginally significant ( $\beta = -.116$ ,  $p = .08$ ). The fact that efficacy and secondary control continue to predict Time 2 satisfaction when Time 1 satisfaction is controlled for is notable, considering how strongly Time 1 satisfaction predicted Time 2 satisfaction ( $\beta = .572$ ,  $p < .001$ ).

To examine the impact of the four combinations of Time 1 primary and secondary control (high/high, high/low, low/high, low/low) on Time 2 relationship satisfaction (Hypothesis 3f), a Primary Control (low/high) x Secondary Control

(low/high) x Gender (male/female) 2 x 2 x 2 factorial design was conducted with Time 2 satisfaction as the dependent measure.

Consistent with analyses for Time 1 satisfaction, a significant main effect was found for secondary control on Time 2 relationship satisfaction. Individuals with high secondary control at Time 1 were less satisfied with their relationship at Time 2 ( $M = 40.17$ ) than individuals with low secondary control ( $M = 43.76$ ),  $F(1, 88) = 4.04, p < .05$ . Thus, individuals who were high in secondary control were less likely to still be in their relationship (see results for Hypothesis 4c above) and if they were still in their relationship at Time 2, they tended to be less satisfied relative to individuals with lower secondary control. Unlike Time 1 satisfaction, there was no main effect for primary control on Time 2 satisfaction. Similar to Time 1 satisfaction and again contrary to Hypothesis 3f, there was no interaction effect between primary and secondary control on Time 2 satisfaction.

To be consistent with Time 1 satisfaction analyses, separate 2 x 2 ANOVAs were then computed for men's and women's Time 2 relationship satisfaction. Among women, only secondary control had a significant negative effect on their Time 2 satisfaction: those women with low secondary control were more satisfied than women with high secondary control ( $M = 43.98$  vs.  $39.39$ , respectively),  $F(1, 60) = 12.68, p < .01$ , and this finding is consistent with Time 1 satisfaction. Among men, however, there were no main or interaction effects on Time 2 satisfaction. This lack of findings may be due to the small cell sizes of the four groups of primary and secondary control at Time 2 (i.e., the lowest  $n = 3$ ).

*Predicting Time 2 love.* A multiple linear regression analysis was used to

examine Time 1 demographics (i.e., age, length of relationship, gender, religious beliefs, and ethnicity), relationship perceptions (i.e., controllable and uncontrollable attributions, primary and secondary control, and efficacy), and optimism as predictors of Time 2 relationship love (Table 1.12). Similar to Time 1 love, gender ( $\beta = -.148, p < .05$ ) predicted love in Step 1 of the model, where being female was associated with greater love in the relationship. Unlike Time 1 love, length of relationship did not predict Time 2 love but age did ( $\beta = -.152, p < .05$ ), indicating that being younger was associated with a more loving relationship. In Step 2,  $R^2$  significantly increased from .036 to .202,  $F(11, 163) = 3.75, p < .001$ , indicating that participants' Time 1 relationship perceptions significantly predicted their Time 2 love in the relationship. Similar to Time 1 love, relationship efficacy ( $\beta = .404, p < .001$ ) again predicted love at Time 2, indicating that efficacy is an important predictor of relationship satisfaction and love, both initially and five months later. None of the other relationship perceptions predicted Time 2 love. In Step 3, Time 1 love included as a covariate in the model,  $R^2 = .457, p < .001$ . Relationship efficacy remained a marginally significant predictor of Time 2 love ( $\beta = .139, p = .06$ ). Although only marginal, this effect is noteworthy in light of how strongly Time 1 love predicted Time 2 love ( $\beta = .603, p < .001$ ).

The impact of the four combinations of primary and secondary control (high/high, high/low, low/high, low/low) on participants' Time 2 relationship love was assessed using a primary control (low/high) x secondary control (low/high) x gender (female/male) 2 x 2 x 2 factorial design with Time 2 love as the dependent measure. No significant main or interaction effects were found for Time 2 love.

## Discussion

In general, individuals who participated in Study 1 tended to perceive themselves as “actively involved” in their dating relationships. That is, they attributed various relationship outcomes to controllable causes and rated themselves as high in primary relationship control and efficacy, perceiving themselves as having the capacity to influence various outcomes and the competency to deal with potential relationship challenges. Participants were also generally involved in highly satisfying and loving relationships. These positive perceptions are not surprising given that most of the relationships were fairly new. That is, with the average relationship being only about one and a half years in length, most participants in Study 1 may still have been in the “honeymoon phase” of the relationship.

Another possible explanation for such positive relationship perceptions is self-selection. It is possible that only individuals who felt they were in highly satisfying relationships chose to participate in the current study. However, 25% of individuals who returned to participate at Time 2 were no longer in their relationships. This finding challenges the notion of self-selection and suggests that even if their relationship was in danger of ending, some individuals still chose to participate in the current study.

### *Gender Differences*

Although the men and women who participated in Study 1 were similar in dispositional optimism and in their relationship perceptions of primary control and efficacy, several interesting gender differences were found. One such gender difference concerns controllable relationship attributions. Compared to women, men made more controllable attributions for their relationships. Interestingly, this particular gender

difference may be adaptive because although making more controllable attributions was associated with greater relationship love and satisfaction for men, the opposite was true for women. That is, making more controllable attributions was actually associated with *less* relationship love and satisfaction among women. A possible explanation for this pattern of results may be associated with a tendency for women, more so than men, to internalize certain failure experiences and externalize certain success experiences (Crombie, 1983; Licht, Stader, & Swenson, 1989; Stipek, 1984; Stipek & Gralinski, 1991). Within the context of romantic relationships, women may feel more personal responsibility for negative outcomes in the relationship but give more credit for relationship successes to their partner than to themselves. Thus, while both men and women made controllable relationship attributions (i.e., viewed outcomes as controllable by themselves and/or their partner) men may have perceived themselves as more responsible for relationship-related successes and less responsible for failures, compared to their perceptions for their partner. Following this reasoning, it is feasible that among men, making controllable attributions would be associated with greater positive relationship perceptions (i.e., more satisfaction and love). Conversely, feeling responsible for negative outcomes but not responsible for successes in the relationship may leave women feeling badly about the relationship (i.e., less satisfaction and love). Therefore, the gender difference in the associations between controllable attributions and relationship love and satisfaction may have been a function of differing attributions for relationship successes and failures among men and women.

Further support for this reasoning is provided by a gender difference regarding controllable attributions and relationship efficacy. Following a similar pattern as above,

making controllable attributions was associated with greater relationship efficacy among men but less relationship efficacy among women. Again, a tendency to internalize relationship failures and externalize successes may partly explain why making controllable attributions for relationship outcomes were associated with lower feelings of relationship competency among women. Conversely, if men were internalizing relationship success and externalizing failures, it is reasonable that they would perceive themselves as competent to handle challenges in the relationship (high efficacy).

Other gender differences found in the current study concern associations with uncontrollable relationship attributions. Although men and women were similar in uncontrollable attributions for relationship-related outcomes, making such attributions had stronger, negative links to other relationship perceptions for men compared to women. Uncontrollable attributions were associated with lower levels of both primary control and efficacy for men. Similarly, making such attributions was also linked to less satisfaction and love in the relationship among men compared to women. Thus, believing that one's relationship success or failure depends on uncontrollable causes such as fate or luck appears to be more problematic for men's relationships than for women's. Again, these findings may be due to men externalizing certain negative outcomes. That is, the men in this study may be less satisfied with their relationships and view them as less loving, which they may perceive as failure. In turn, men may externalize these perceived failures by attributing them to external causes such as fate or bad luck. Such uncontrollable attributions may then protect men's self-esteem or self-worth (e.g., they may reason "It's not my fault"), yet lower their sense of influence and competency in the relationship.

An alternate explanation for this gender difference may be due to differing socialization experiences for men and women. Through traditional socialization practices, men have generally been reinforced to strive for influence and mastery in all aspects of their daily lives, relationships included. As such, believing that they cannot control their own relationship outcomes may be especially devastating for men, more so than for women. This reasoning is supported by a gender difference in the association between uncontrollable attributions and primary control, which was more negative for men, indicating that making uncontrollable attributions was related to lower primary control for men than for women. It is possible that primary control is more important to men than to women in terms of their relationships because of the way that they are socialized. As such, feeling less control in their relationship, due to making uncontrollable attributions, may be associated with some men viewing their relationships as less satisfying and loving.

Further support for this socialization explanation is provided by an additional gender difference concerning primary control. Although men and women did not differ in the amount of primary control they felt they had in their relationships, men's (compared to women's) primary control was more positively correlated with their relationship efficacy and satisfaction. Again, these findings suggest that a sense of influence, which is largely gained through making fewer uncontrollable attributions (and more controllable ones), may be more critical to men's relationship perceptions than to women's relationship perceptions. That is, a sense of being able to influence relationship outcomes may be more rewarding for men because it fits with the "mastery" orientation that they have been reinforced for throughout their lives.

Gender differences were also found for relationship satisfaction and love.

Although both genders rated their relationship as highly satisfying and loving, compared to men, women reported that their relationships were slightly more satisfying and loving. Perhaps because women tend to be more communally-oriented than men (Suh, Moskowitz, Fournier, & Zuroff, 2004), they were more motivated than men to view their relationships positively. For instance, because of their communal orientation, women may invest more effort into keeping their relationship satisfying compared to men, who tend to be less communally-oriented and more agentic. Moreover, because the love construct in the current study included intimacy and commitment components, it is no surprise that women rated their relationship as more loving than men did, as both intimacy and commitment have been found to be positively associated with a communal relationship orientation (Ruthig, 2000).

#### *Ethnicity Differences*

A significant ethnicity difference was found for uncontrollable attributions where European/Caucasians made fewer uncontrollable relationship attributions than did their non-European/Caucasian counterparts. European/Caucasians also perceived themselves as having more primary control and less secondary control in their relationships compared to non-European/Caucasians. These ethnicity differences are not surprising, considering that many of the participants comprising the non-European/Caucasian group were from Eastern cultures that may favor secondary control over primary control (Azuma, 1984). Within such cultures, relinquishing control demonstrates maturity and flexibility and the use of certain secondary-control strategies, such as acceptance, may be motivated by love and empathy. Thus, ethnicity differences in attributions, primary

control, and secondary control found in this study may be due to differing cultural ideologies between Western and non-Western societies (Grob, 2000; Weisz et al., 1984).

*Attributions, Perceived Control and Efficacy*

*Attributions and control.* Perceived primary control is a product of an individual's belief in the contingency between his or her actions and an outcome, with the contingency belief being shaped by the individual's causal attributions. The stronger the perceived contingency, the greater the sense of primary control. Although previous research has examined attributions within intimate relationships (e.g., Bradbury & Fincham, 1992; Karney & Bradbury, 2000; Schaefer-Porter & Hendrick, 2000), it has not considered how such attributions influence perceptions of primary relationship control. Study 1 extended past research by exploring the associations among controllable and uncontrollable attributions and primary and secondary control within the context of romantic relationships. As expected, the more controllable attributions participants made, the more control they felt they had over relationship outcomes. Conversely, making uncontrollable attributions was associated with lower primary control in the relationship. Thus, the notion that perceived contingency between individuals' actions and outcomes increases or decreases primary control perceptions appears to be true within the context of romantic relationships.

As expected (Rothbaum et al., 1982), secondary relationship control was positively correlated with uncontrollable relationship attributions, indicating that individuals may rely on changing their inner cognitions to adjust to situations in their relationship that they perceived to be uncontrollable. Surprisingly, secondary control was *positively* associated with controllable attributions in the relationship. A possible

explanation for this seemingly counterintuitive finding is that the measure of controllable attributions in the current study included both internal and external attributions (i.e., attributions to self and attributions to one's partner). Thus, some participants may have made more controllable but external attributions than controllable/internal attributions for various relationship outcomes. In this case, although the cause attributed to a certain outcome is controllable (by someone), it is not internally controllable (by self). As such, it is conceivable that those participants may rely on secondary control because they believe they cannot directly influence the outcome. Following this explanation, one would expect a stronger correlation between secondary control and controllable/external attributions (controllable by partner) compared to controllable/internal attributions (controllable by self). This was not the case, however, as the correlations with secondary control were quite similar:  $r = .22$  for controllable/external attributions and  $r = .26$  for controllable/internal attributions. Thus, participants were similar in their secondary control perceptions regardless of whether they made more controllable/external or controllable/internal attributions for relationship outcomes.

An alternate explanation for the positive association between secondary control and controllable attributions is that even if individuals attribute relationship-related outcomes to controllable causes, they may actually prefer to engage in secondary-control strategies rather than automatically relying on primary-control strategies. This seems especially relevant within a relationship context because individuals may weigh the costs and benefits of acting outwardly versus changing their own perceptions regarding a particular situation in order to "keep peace" in the relationship and avoid "rocking the boat."

Primary and secondary relationship control were not related, supporting the premise that they are not opposites along a single continuum. Instead, primary and secondary control likely occur along two separate continua. Thus, it is possible for some individuals to perceive themselves as high in both types of control, high in one type of control and low in the other, or low in both types of control. Moreover, it is also possible for individuals to switch between primary and secondary control strategies or to use a combination of both types of strategies as necessary within the context of relationships.

*Efficacy.* The current study also examined individuals' evaluations of their competencies in handling various relationship challenges. Recall that attributions are thought to influence perceptions of control. In turn, perceptions of control are necessary to make judgements of efficacy in exercising that control (Bandura, 1982). As such, the current study examined the association between participants' perceptions of relationship control and relationship efficacy. As expected, the more control individuals felt they had in the relationship, the more competent they felt in dealing with various relationship challenges. Interestingly, secondary control was negatively associated with relationship efficacy, where higher ratings of secondary control were associated with less perceived efficacy in the relationship. Thus, it appears that within the context of romantic relationships, individuals must perceive themselves as having primary control or direct influence within the relationship in order to judge themselves as competent to handle challenges that may arise. Moreover, secondary control does not contribute to relationship efficacy. Instead, adjusting one's own relationship expectations may actually deplete feelings of competency in the relationship. Conversely, feeling unable to effectively resolve certain relationship challenges (i.e., low efficacy), may lead

individuals to alter their own expectations (i.e., rely on secondary control) in order to retain some sense of control within the relationship.

### *Optimism*

Aside from attributions, perceived control, and efficacy, individuals' positive expectations may also influence how they view their relationships. The current study considered the role of optimism in relationship perceptions. Specifically, a global measure of dispositional optimism was examined in terms of how it related to individuals' relationship perceptions, including perceived primary control and efficacy.

Similar to previous research (e.g., Fitzgerald et al., 1993), dispositional optimism in the current study was associated with greater primary control. Individuals who had a general expectation that good things would happen also thought that they had more influence in the relationship compared to less optimistic individuals. Also as predicted, optimism was associated with greater relationship efficacy. Together, these findings suggest that general positive expectations may contribute to a greater sense of influence and competency to successfully handle challenges in one's relationship. Conversely, it is also possible that a greater sense of control and efficacy in one's relationship contributes to a more optimistic outlook on life in general. The latter explanation is less plausible, however, considering that dispositional optimism is thought to be a trait-like orientation that remains fairly stable over time (Radcliffe & Klein, 2002). In fact, the five month test-retest reliability of dispositional optimism was .74 in the current study, providing further support for the notion that it is a stable, trait-like construct. Thus, individuals may have numerous relationships over the course of their lives in which they experience differing levels of control and efficacy, yet their dispositional optimism is likely to be

relatively consistent over time and across relationships. Finally, it is possible that a third factor, (e.g., certain life experiences) contributed to both dispositional optimism and participants' perceptions of relationship primary control and efficacy.

In sum, whether positive expectations contribute to a greater sense of influence and competence, or vis versa, or whether a third factor is responsible for all three, dispositional optimism was associated with greater levels of primary control and efficacy. Thus, the current findings provided support for the notion that positive expectations and a sense of influence and competency go hand in hand (Scheier & Carver, 2003). Consistent with this pattern of findings is the fact that optimism was negatively associated with uncontrollable attributions and secondary control, indicating that participants with more positive expectations tended to make fewer uncontrollable attributions and had lower levels of secondary control in their relationship. Klein and Helweg-Larsen (2002) explain that individuals who have a positive association between primary control and optimism may also rely on primary control to a greater extent than secondary control. Thus, the negative associations between optimism and uncontrollable attributions and secondary control in the current study may partly be due to the positive association between primary control and optimism.

#### *Relationship Longevity and Satisfaction*

A main objective of Study 1 was to examine the roles of relationship attributions, perceived control, and efficacy in relationship longevity and satisfaction in order to address the notion that actively participating in one's relationship should predict longevity and satisfaction in that relationship. Further, based on the assumption that a positive outlook may also play a role in relationship maintenance, optimism was

examined in terms of its connection to relationship longevity and satisfaction.

*What Determines Whether Relationships Last?*

Upon examining the types of relationship perceptions that predicted longevity, some unexpected results were found. Contrary to the idea that viewing oneself as an active agent in one's relationship leads to a lasting relationship, controllable attributions and primary control failed to predict longevity. However, initial relationship efficacy was higher among individuals who remained in their relationship five months later compared to those whose relationships had ended, providing some support for the notion that active participation in one's relationship contributes to a lasting relationship. Together, these findings suggest that a judgement of relationship competency, rather than a sense of controllability, partly determines whether the relationship will last. It should be noted, however, that although primary control did not directly predict longevity, it was positively associated with efficacy and the bivariate correlation between primary control and longevity was significantly positive ( $r = .10, p < .05$ ). Thus, being an active participant in one's relationship may begin with a sense of primary control, which is associated with relationship efficacy, which in turn, contributes to a lasting relationship.

Unexpectedly, perceptions of secondary relationship control *negatively* predicted longevity and participants who ended their relationships had higher initial (Time 1) ratings of secondary control than did those who maintained their relationships. These findings indicate that relying on a sense of control via altering one's own relationship cognitions (i.e., acceptance or adjusting expectations) does not help to maintain relationships. Conversely, acceptance or changing the way that one thinks about one's relationship may actually decrease the chances of that relationship lasting. A possible

explanation for this negative impact of secondary control is that in dealing with certain undesirable aspects of the relationship by changing the way one thinks about them (rather than directly addressing them) may leave certain relationship issues unresolved or even exacerbated. In this instance, high secondary control individuals may be “fooling” themselves, believing that certain problems are not as bad as they seem, that their relationship is tolerable when compared to other, worse relationships, or that their relationship is simply “as good as it gets.” Thus, for some individuals, high secondary control may undermine primary control by making attempts to improve the relationship or solve certain problems seem unnecessary. This reasoning is consistent with research showing that secondary control can be maladaptive in controllable situations (Halliday & Graham, 2000).

Furthermore, because secondary control is internal and thus, undetectable by others, some partners may misperceive high secondary control individuals’ passive acceptance as an indication that everything is fine and nothing is wrong in the relationship. As such, the partner would likely think that there is no reason to change anything in the relationship even though the high secondary control individual may be secretly unhappy with certain aspects of the relationship. Conversely, one’s partner may also misperceive one’s passive acceptance as refusal to work on issues or as giving up on the relationship. Consequently, such misperceptions may then lead one’s partner to end the relationship. Alternatively, secondary control may only be effective for a short amount of time until individuals can no longer fool themselves and are faced with ending the relationship, having left certain issues unresolved for so long that they eventually become unresolvable.

Although other possible explanations exist, exacerbating relationship issues by neglecting to directly address them and partner misperceptions are two plausible reasons for the negative role that secondary control appears to play in relationship longevity. Although secondary control was clearly detrimental to relationship maintenance, the measure used in the current study consisted of only two types of secondary control, namely passive acceptance (e.g., “My partner and I will work out our differences if we’re meant to”) and interpretive control (e.g., “Although things may go wrong in this relationship, other relationships are worse than my own”). Thus, it is important to recognize that including different types of secondary control perceptions, such as vicarious or illusory control, may have yielded less (or perhaps more) negative results.

Interestingly, dispositional optimism did not predict relationship longevity, suggesting that a general positive outlook may not be necessary for a relationship to last. Instead, it appears that relationship-specific perceptions are more important to relationship longevity, rather than a general expectation that good things will happen. In fact, general positive expectations associated with dispositional optimism may actually help individuals leave less satisfying relationships. That is, some individuals involved in unsatisfying relationships who have high dispositional optimism may choose to end their relationships, believing that a better relationship is out there waiting for them.

Not surprisingly, and consistent with past research (e.g., Sternberg, 1986), love positively predicted relationship longevity. Moreover, participants who were still in their relationships at Time 2 reported significantly more satisfaction at Time 1 than did those participants whose relationships had ended. These findings are logical considering that satisfaction and love were highly correlated in the current study and that satisfaction is

often found to be the strongest predictor of lasting relationships (Shackelford & Buss, 1997). As such, it is important for relationship researchers to consider not only what contributes to relationship longevity, but to also examine factors that make relationships satisfying. This consideration was taken into account in the current study and is discussed in the following paragraphs.

#### *What Makes Lasting Relationships Satisfying?*

Now that determinants of longevity have been identified, what makes such relationships worth maintaining? It is worthwhile to consider factors that contribute to satisfaction and love in relationships. The current study examined several demographic variables and relationship perceptions as potential predictors of relationship satisfaction and love. Interestingly, none of the demographic variables predicted satisfaction in participants' relationships, not initially, nor five months later. This suggests that individuals' perceptions may be more important to their relationship satisfaction than their age, ethnicity, religious beliefs, or how long they have been in the relationship. For love, however, gender, age, and length of relationship were significant predictors, but to a lesser extent than relationship efficacy. Thus, as with satisfaction, relationship perceptions appear to be more important than demographics in predicting love.

Of the relationship perceptions examined in Study 1, individuals' primary control predicted relationship satisfaction initially, but not over time, nor did it predict love in the relationship. A stronger predictor of satisfaction and love was relationship efficacy, which significantly predicted both satisfaction and love initially and over time, even after accounting for prior ratings of satisfaction and love. Thus, it appears that similar to longevity, when it comes to satisfaction and love in their relationship, individuals'

judgements of their own competency to handle various relationship challenges plays a more important role than their perceptions of controllability.

Although positively correlated with both, dispositional optimism did not predict relationship satisfaction or love. This is not surprising considering that dispositional optimism is a global construct which is thought to remain fairly constant, regardless of fluctuations in individuals' lives, such as involvement in various romantic relationships. Furthermore, individuals who have greater dispositional optimism may believe something better will come their way, and thus, may not be overly concerned with the amount of satisfaction and love they feel in their current relationship.

In sum, the current findings indicate that efficacy was the strongest predictor of relationship satisfaction and love, both initially and over time. It should be recognized that there are other potential predictors of satisfaction and love (in addition to those examined in the current study) and that satisfaction and love were only measured at two points in time (with a relatively short time in between). Thus, relationship research would benefit from a longitudinal study examining predictors of satisfaction and love measured multiple times over an extended time period to provide further insight into the predictability of satisfaction and love over time.

#### *Optimal Combinations of Primary and Secondary Control*

According to the control literature (e.g., Heckhausen & Schulz, 1998; Weisz et al., 1984), perceiving oneself as having high levels of both primary and secondary control should be most adaptive, as this combination of control enables individuals to use either type of control as needed. This assumption was tested in the current study within the context of romantic relationships. Specifically, it was determined whether a

greater number of individuals with high levels of both primary and secondary relationship control were still in their relationship (five months later) compared to individuals with high levels of one type of control and low levels of the other type, or those with low levels of both primary and secondary control. Interestingly, this assumption was not supported in the current study. Only 58.6% of the high primary/high secondary control individuals were still in their relationship five months later compared to 92.3% of low primary/low secondary control participants whose relationships were intact. Among high primary/low secondary control participants, 90.9% were still in their relationship and among low primary/high secondary control participants, 61% remained in the relationship. These findings indicate that the control combination expected to result in the highest frequency of lasting relationships (i.e., high primary/high secondary control) actually resulted in the fewest intact relationships of all four groups.

This seemingly counterintuitive finding may partly be due to the negative relation found between secondary control and relationship satisfaction. As stated previously, higher perceptions of secondary control were associated with less relationship satisfaction. Thus, participants with high secondary control (i.e., high secondary control paired with either low or high primary control) had relatively less satisfying relationships than those with low secondary control. Following this connection, some individuals with high secondary control *and* high primary control may have acted upon their primary control perceptions by choosing to leave the relationship if they felt it was less satisfying than they desired. Alternatively, as in past research (e.g., Halliday & Graham, 2000), secondary control may have undermined the benefits of high primary control by reducing participants' outward attempts to make the relationship

more satisfying. Conversely, individuals with high secondary but low primary control, although less satisfied, may not have felt they had the capacity to leave the relationship (lack of primary control) and thus, were still in the relationship five months later. The negative relationship between secondary control and satisfaction may also partly explain why many high primary/low secondary control participants remained in the relationship. That is, among these individuals, having lower secondary control would mean relatively more satisfaction and thus, less reason to want to leave the satisfying relationship.

*Satisfaction and love.* The impact of these primary and secondary control combinations was further explored in terms of participants' satisfaction in their relationships. Interestingly, men with high primary control were more satisfied with their relationship than were their low primary control counterparts and women with high secondary control were less satisfied with their relationship than those with low secondary control. Thus, it appears that relationship satisfaction is associated with high primary control for men and low secondary control for women. Regarding love, individuals with high secondary control reported less love in their relationship than individuals with low secondary control, regardless of gender. Thus, possibly due to unresolved issues and partner misperceptions (as discussed earlier), greater secondary control is associated with less loving relationships.

*Can low perceived control be a good thing?* Aside from indicating that having high levels of both primary and secondary relationship control was not optimal (possibly due to the negative impact of secondary control), the current findings also show that having low levels of both types of control was not the worst-case scenario. That is, participants with low primary/low secondary control were not the most likely to end their

relationship (in fact, they were the *least* likely), nor were they the least satisfied or loving of the four primary/secondary control groups. This may seem odd considering that control research suggests individuals who have low levels of both primary and secondary control tend to experience feelings of helplessness and an inability to cope effectively (Abramson et al., 1980). Thus, it is plausible that something other than a sense of control is responsible for keeping low control individuals in satisfying, loving relationships.

In an attempt to explore why low primary/low secondary control individuals stayed in their relationship, the four combinations of control were compared in terms of mean differences on all other relationship variables in the current study, yet no differences were found. That is, the low primary/low secondary control group did not differ in length of relationship, religious beliefs, ethnicity, age, optimism, relationship attributions, or efficacy compared to the other three control groups. Thus, the idea that these low control individuals rely more on optimism or religious beliefs, to sustain their relationships, was not supported. Moreover, compared to the other groups, satisfaction and love among the low/low control group was not more strongly related to other relationship factors. This leaves the question of what contributes to satisfied and loving relationships for low control individuals unanswered and the explanation must lie in relationship factors other than those examined in the current study.

### *Summary of Study 1*

To summarize, the current findings indicate that compared to various demographics, individuals' relationship perceptions play a greater role in relationship longevity, satisfaction, and love. In particular, individuals' controllable relationship attributions were associated with greater primary control which in turn were associated

with greater relationship efficacy. Importantly, relationship efficacy was found to be a strong predictor of lasting, satisfying, and loving relationships. Conversely, secondary relationship control was found to negatively predict relationship satisfaction and longevity, perhaps due to partner misperceptions, avoiding certain issues in the relationship, or undermining outward attempts to improve the relationship. In some instances, optimism was positively associated with individuals' relationship perceptions but was not a significant predictor of satisfaction, love, or longevity. Finally, the current study revealed that low levels of both primary and secondary relationship control were not detrimental to individuals' relationships and that in such cases, low control individuals likely rely on coping strategies other than those assessed in the current study. Where Study 1 examined various relationship perceptions as predictors of relationship satisfaction, love, and longevity over time, Study 2 contributes to this research by examining the same relationship perceptions cross-sectionally among a wide range of the adult life span.

## Study 2

### *Overview and Hypotheses*

As in Study 1, the current study examined the role of relationship attributions, primary and secondary control, efficacy, optimism, and satisfaction among individuals in romantic relationships. Although the same relationship perceptions were assessed, the purpose of the current study differed from Study 1. The previous study examined relationship perceptions as predictors of satisfaction and longevity of the relationship. In contrast, the current study explored how these perceptions vary as a function of age and life events across the adult life span. Study 2 was cross-sectional in that relationship

attributions, primary and secondary control, efficacy, optimism, and satisfaction were assessed among individuals of various ages (i.e., 17.5 to 77 years old), allowing for examination of how relationship perceptions vary as a function of age and various life events (i.e., marriage, parenting, retirement, empty nest).

*Replication.* As in Study 1, positive correlations were expected between controllable attributions, primary control, efficacy, and satisfaction, so that individuals who make controllable attributions should perceive themselves as having primary control, being efficacious, and satisfied in their relationship. A positive correlation was again expected between uncontrollable attributions and secondary control, so that the more uncontrollable attributions individuals make regarding their relationships, the more they would rely on secondary control. Similar to the previous study, uncontrollable attributions were expected to be negatively correlated with controllable attributions, primary control, efficacy, and satisfaction. In addition, dispositional optimism was explored in terms of its correlations with each of the relationship constructs.

*Age effects.* Control literature (e.g., Schulz & Heckhausen 1996, 1999) suggests that as individuals age, they come to rely more on secondary control as primary control becomes increasingly unrealistic. This age-related premise of control has been explored and supported within health and aging domains (e.g., Chipperfield et al., 1999), but not within the context of romantic relationships. The current study, in addition to addressing various life event questions, provided the opportunity to test control theory in terms of age-related changes in reliance on primary and secondary control. Based on the developmental assumptions of primary and secondary control theory (e.g., Schulz & Heckhausen, 1996), it was expected that primary relationship control would be lower

among older adults in the current study compared to younger adults. Conversely, secondary control is assumed to continue increasing with age. It was predicted that older adults would have higher secondary relationship control compared to younger adults.

Although no hypotheses were formulated, age-related differences in relationship-specific attributions, efficacy, optimism, and satisfaction were also examined. Specifically, it was determined whether younger adults differ from older adults in terms of making controllable or uncontrollable attributions for their romantic relationships. It was also determined whether age affects ratings of relationship efficacy and satisfaction. Finally, it was determined whether differences in dispositional optimism exist as a function of age.

*Life events.* It is somewhat difficult to separate age effects from the impact of certain life events because they often occur together (e.g., people tend to marry within a certain age range and retire within another age range). In light of this difficulty, the influence of various life events on relationship perceptions was examined in the current study. Specifically, the impact of marriage was explored by comparing ratings of relationship attributions, control, efficacy, optimism, and satisfaction among married versus unmarried (i.e., dating or co-habiting) individuals in analyses that accounted for potential age-related confounds. Similar comparisons were made among individuals who were parents versus those without children, retired versus working individuals, and among individuals who still had children living with them versus those who had an “empty nest.” Although no specific predictions were made, the impact of significant life events on individuals’ perceived role in their relationship and their evaluations of that relationship were explored. These explorations included gender as a potential moderator.

## Method

### *Participants*

Participants in the current study were 114 University of Manitoba alumni and 40 Introductory Psychology students. Based on a master list of names, addresses, and graduation dates, alumni were randomly selected from four graduating years: 1965, 1975, 1985, and 1995 ( $n \sim 35$  per year). To represent the youngest adults, 40 Introductory Psychology students were recruited to participate in the study in exchange for experimental credit. In order to participate in the study, individuals were required to be in an exclusive romantic relationship.

### *Procedure*

Randomly selected potential participants were initially contacted via telephone by the experimenter to determine whether they were willing and eligible to participate in the study (i.e., currently involved in an exclusive romantic relationship). Of the 305 alumni successfully contacted, 145 individuals (59 women and 46 men) indicated that they were not interested in participating in the study. The remaining 160 alumni who were successfully contacted indicated that they were eligible and interested in participating in the study at the time of the initial phone contact. These individuals were mailed a package including an introductory letter reminding them of the study and asking for their assistance by completing the attached survey containing questions about their thoughts and feelings toward their current relationship. Participating alumni were also asked to complete a consent form and the survey and to return them separately (to ensure anonymity) to the experimenter in the accompanying stamped/addressed envelopes. One month after surveys were mailed, a letter was sent to participants to remind them to

complete and return the survey if they had not already done so and thanking them for participating in the study. Of the 160 alumni who agreed to participate, 114 returned completed surveys, resulting in a total of 154 participants, including the 40 undergraduate participants.

### *Measures*

*Relationship perceptions.* Participants completed the same measures of relationship attributions, primary and secondary control, efficacy, optimism, and satisfaction as in Study 1. Relationship longevity was not assessed in the current study.

*Demographics.* Similar to Study 1, Study 2 included demographic questions asking how long participants had been in their current relationship, their age, their gender, whether English was their first language, and which ethnic background they identified with most. They were also asked whether their parents and they, themselves were born in Canada, and how strong their religious beliefs were. In addition to these questions, participants were asked to indicate whether they were married and if so, for how long. Similarly, in order to assess the impact of parenting on relationship perceptions, participants were asked to indicate if they had children. Participants who indicated that they had children were asked whether the children still lived with them, in order to assess the impact of having an “empty nest.” Finally, participants were asked whether they were working or whether they were retired to assess the impact of retirement on their relationship perceptions.

## Results

### *Preliminary Analyses*

*Participants.* In the current study, participants ranged in age from 17.5 to 77

years of age ( $M = 41.26$ ;  $SD = 16.09$ ) and were living in various regions of Canada at the time of the study. Male participants were slightly older than female participants ( $M_s = 45.13$  and  $38.88$  years of age, respectively),  $t(150) = -2.38$ ,  $p < .05$ . Most participants ( $n = 139$ , 90.3%) indicated that English was their first language (15 or 9.7% indicated that it was not). Similarly, most participants indicated that their parents were born in Canada ( $n = 118$ , 76.6%) and that they themselves were born in Canada ( $n = 144$ , 93.5%).

Regarding ethnicity, most participants identified themselves as European/Caucasian ( $n = 143$ , 92.9%). The remaining participants were Aboriginal ( $n = 3$ , 2.0%), East Indian ( $n = 1$ , 0.6%), Asian ( $n = 2$ , 1.3%), or African ( $n = 3$ , 1.9%). Two participants (1.3%) did not indicate their ethnicity. Participants' religious beliefs ranged from 1 (*not strong*) through 7 (*very strong*),  $M = 4.38$ ;  $SD = 2.04$ . When asked if they were a parent, 97 (63%) participants said yes, 16 (10.4%) participants said no, and 41 (26.6%) participants did not indicate whether or not they had children. Among those who indicated they were parents, 64 (41.6%) had children living with them and 33 (21.4%) indicated that their children no longer lived with them. When asked about their occupational status, 76 (49.4%) participants indicated that they were currently working, 26 (16.9%) participants indicated that they were retired, and 12 (7.8%) were neither working nor retired (i.e., student, on maternity leave, unemployed, etc).

Regarding their romantic relationships, the length of participants' relationships ranged from three months to 50 years, with an average of over 17 years ( $M = 17.37$  years;  $SD = 13.94$ ). Most participants ( $n = 104$ , 67.5%) indicated they were currently married, 31 (20.1%) were not married, and 19 (12.3%) did not respond to the question. When asked about previous relationships, 19 participants (12.3%) said they had been

married previously, 112 (72.7%) had not been married previously, and 23 (15.0%) did not respond. Most participants had been in a serious relationship prior to their current relationship ( $n = 86$ , 55.8%) and 68 (44.2%) said they had never been in a serious relationship prior to their current relationship. When asked about their parents' marital status, 84 (54.5%) participants indicated that their parents were currently married, 16 (10.4%) indicated their parents were divorced, 53 (34.4%) indicated "other" (e.g., parents were separated or deceased), and one participant did not respond to the question. Of those participants who indicated their parents were currently married, 71 (84.5%) indicated their parents have a good marriage and 13 (15.5%) participants said their parents did not have a good marriage.

*Relationship perceptions.* See Table 2.1 for descriptive statistics of the relationship perception measures from Study 2. As in Study 1, participants in Study 2 generally saw various aspects of their relationship as controllable (i.e., high average ratings on controllable attributions) rather than uncontrollable (i.e., low average ratings on uncontrollable attributions). Also similar to Study 1, participants rated themselves as high in primary relationship control and relationship efficacy, but only moderate in secondary relationship control. Overall, participants rated their current relationships as highly satisfying and loving.

Significant gender differences were found for uncontrollable attributions and efficacy in the relationship. Specifically, compared to the men, women made fewer uncontrollable attributions toward their relationship,  $M = 6.59$  for women and  $M = 7.88$  for men,  $t(150) = -2.68$ ,  $p < .01$ . Women also had slightly higher ratings of relationship efficacy ( $M = 69.81$ ) compared to men ( $M = 66.04$ ),  $t(148) = 1.97$ ,  $p = .05$ . No other

gender differences were found.

### *Replication Analyses*

A main objective of the current study was to determine whether the results of Study 1 were generalizable to a broader range of adult romantic relationships. As part of the attempt to replicate the findings of Study 1, bivariate correlations among participants' relationship perceptions and dispositional optimism were computed (see Table 2.2 for all bivariate correlations for Study 2).

*Relationship attributions, control, and efficacy.* As expected and consistent with Study 1, controllable relationship attributions were positively correlated with primary relationship control ( $r = .25, p < .001$ ), whereas uncontrollable attributions were negatively correlated with primary control ( $r = -.29, p < .001$ ), but positively associated with secondary relationship control ( $r = .40, p < .001$ ). Also consistent with Study 1, the correlation between primary and secondary control was non-significant ( $r = -.09$ ), further supporting the premise that these two types of control are independent of each other.

The correlations between relationship efficacy and primary and secondary control from Study 1 were replicated in Study 2. That is, greater ratings of efficacy were associated with greater primary control but less secondary control ( $r = .38, p < .001$  and  $r = -.31, p < .001$  for primary and secondary control, respectively). Thus, the associations among relationship attributions, perceived control, and efficacy from Study 1 were fully replicated in Study 2, indicating that they apply to a greater range of adult romantic relationships than simply those existing among Introductory Psychology students.

*Optimism.* As in Study 1, the correlations between dispositional optimism and primary control and efficacy were positive ( $r_s = .25, p < .01$  and  $r = .39, p < .001$  for

primary control and efficacy, respectively), indicating that a greater sense of control and competency in one's relationship was associated with more positive expectations. Also consistent with Study 1, optimism was negatively associated with both uncontrollable relationship attributions ( $r = -.33, p < .001$ ) and secondary control ( $r = -.17, p < .01$ ), but not significantly correlated with controllable attributions ( $r = .02$ ).

*Relationship satisfaction.* The correlations among relationship perceptions, optimism and participants' relationship satisfaction were again examined in the current study to determine if results replicated those in Study 1. Regarding relationship attributions, the pattern of results in the current study was consistent with Study 1: although controllable attributions were not associated with satisfaction ( $r = -.07, ns$ ), making uncontrollable attributions was associated with less relationship satisfaction ( $r = -.26, p < .01$ ). As in Study 1, greater levels of primary control ( $r = .32, p < .001$ ), efficacy ( $r = .55, p < .001$ ), love ( $r = .85, p < .001$ ), and dispositional optimism ( $r = .34, p < .001$ ) were all associated with greater relationship satisfaction in Study 2. Although the correlation between relationship satisfaction and secondary control was negative in both studies, it did not reach significance in Study 2 ( $r = -.12$ ). Thus, with the exception of this last correlation, the associations with relationship satisfaction from Study 1 were largely replicated in Study 2.

*Gender differences.* Bivariate correlations among all study variables were re-computed separately for each gender (Table 2.3). There were only two significant gender differences found. The first difference was for the correlation between controllable attributions and length of relationship,  $z = -2.19, p < .05$ . For men, longer relationships were associated with making fewer controllable relationship attributions ( $r = -.31, p <$

.05), yet this correlation was non-significant among women ( $r = .07, ns$ ). The second significant gender difference was found for the correlation between dispositional optimism and length of relationship,  $z = 2.97, p < .01$ . Greater optimism was associated with longer relationships for women ( $r = .38, p < .001$ ), but associated with shorter relationships for men, although not significantly so ( $r = -.19, ns$ ). None of the gender differences in correlations found in Study 1, nor any additional gender differences were found in the current study.

*Predicting relationship satisfaction.* To determine whether the same predictors of relationship satisfaction in Study 1 were also predictors of relationship satisfaction in Study 2, multiple linear regression analyses were used to examine Study 2 demographics (i.e., age, length of relationship, gender, religious beliefs, and ethnicity), relationship perceptions (i.e., controllable and uncontrollable attributions, primary and secondary control, and efficacy), and optimism as predictors of relationship satisfaction (Table 2.4). Participants' demographics were entered in Step 1 of the model and their relationship perceptions and optimism were then entered in Step 2, with relationship satisfaction as the criterion variable. In Step 1 participants' demographics significantly predicted their relationship satisfaction,  $R^2 = .116, F(5, 129) = 3.39, p < .01$ . In particular, age ( $\beta = -.579, p < .01$ ), ethnicity ( $\beta = -.216, p < .05$ ), and length of relationship ( $\beta = .594, p < .01$ ) significantly predicted satisfaction, where being younger, European/Caucasian, and in a longer relationship were associated with more satisfying relationships. In Step 2,  $R^2$  significantly increased to .536,  $F(11, 123) = 12.90, p < .001$ , indicating that participants' relationship perceptions significantly predicted their satisfaction with that relationship. In Step 2, age ( $\beta = -.565, p < .01$ ), ethnicity ( $\beta = -.145, p < .05$ ), and length of relationship

( $\beta = .556, p < .01$ ) remained significant predictors of satisfaction. In addition to these demographic predictors, participants' primary relationship control ( $\beta = .199, p < .01$ ) and relationship efficacy ( $\beta = .536, p < .001$ ) positively predicted their satisfaction. Thus, as in Study 1, greater perceptions of primary relationship control and efficacy were associated with more satisfying relationships among participants in Study 2, suggesting that these two relationship perceptions predict satisfaction consistently across a large range of the adult life span. It is important to note that similar regressions were computed for love, which correlated .85 with satisfaction, thus it was no surprise that the significant predictors of satisfaction were identical to the predictors of love.

As in Study 1, the impact of the four combinations of primary and secondary control (high/high, high/low, low/high, low/low) on Study 2 participants' relationship satisfaction was again examined by categorizing participants as either low or high on primary control and low or high on secondary control based on an extreme split analyses in which the middle third of the distribution was dropped. Then, a primary control (low/high) x secondary control (low/high) x gender (female/male) 2 x 2 x 2 factorial design was conducted with satisfaction as the dependent measure.

Consistent with Study 1, a significant main effect was found for primary control on relationship satisfaction, where individuals with high primary relationship control were more satisfied with their relationship ( $M = 42.61$ ) than were their low primary control counterparts ( $M = 39.02$ ),  $F(1, 110) = 4.51, p < .05$ . Also similar to Study 1, a marginal main effect was found for secondary relationship control on satisfaction, but in the opposite direction from primary control. Specifically, individuals with high secondary control were less satisfied with their relationship ( $M = 39.87$ ) than individuals

with low secondary control ( $M = 42.18$ ),  $F(1, 110) = 3.14$ ,  $p = .08$ . Interestingly, and unlike Study 1, there was a significant Primary Control by Secondary Control interaction,  $F(1, 110) = 6.16$ ,  $p < .05$  (see Figure 1). Participants with low primary/high secondary relationship control had significantly less satisfying relationships ( $M = 36.67$ ) than the other three groups: low primary/low secondary: ( $M = 41.96$ ),  $t(52) = 2.59$ ,  $p < .05$ ; high primary/low secondary: ( $M = 42.34$ ),  $t(60) = 2.79$ ,  $p < .01$ ; and high primary/high secondary ( $M = 42.88$ ),  $t(60) = 3.88$ ,  $p < .001$ . Again, findings were very similar when the above analyses were computed with love as the dependent measure.

#### *Age Analyses*

Contrary to the predictions that primary relationship control should decrease with age and secondary control should increase with age, the correlations between age and primary control and age and secondary control were non-significant ( $r = .13$ , *ns* for primary control and  $r = -.04$ , *ns* for secondary control). Moreover, none of the correlations between age and other relationship perceptions (i.e., controllable and uncontrollable attributions, efficacy, and satisfaction) were significant.

#### *Life Events Analyses*

In order to examine the impact of various life events on participants' relationship perceptions, several 2 x 2 (Life Event x Gender) ANCOVAs were conducted using age as a covariate in order to account for potential age-related confounds.

*Marital status.* To test the effects of marriage on relationship perceptions, married individuals were compared to unmarried (i.e., dating, cohabitating) individuals in a 2 (married vs. unmarried) x 2 (male vs. female) ANCOVA with ratings of relationship attributions, primary control, secondary control, efficacy, satisfaction, and

love as the dependent measures.

Regarding perceptions of secondary control, there were no significant main effects but a significant Gender x Marital Status interaction was found for secondary control,  $F(1, 124) = 7.62, p < .01$ . Unmarried women had significantly more secondary control ( $M = 40.39$ ) than either married women ( $M = 34.78$ ),  $t(75) = 3.03, p < .01$ ; or unmarried men ( $M = 39.43$ ),  $t(28) = 2.19, p < .05$ . Thus, being married (relative to unmarried) was associated with less secondary relationship control among women. No other significant effects were found with controllable or uncontrollable attributions, primary control, efficacy, satisfaction or love as the dependent measures.

*Parental status.* Similar to the above analyses, a 2 (parent vs. non-parent) x 2 (male vs. female) ANCOVA was used to assess the effects of being a parent on relationship perceptions. Significant main effects on controllable attributions were found for both parental status and gender: parents reported making more controllable relationship attributions than non-parents ( $M_s = 28.47$  vs.  $25.69$ , respectively),  $F(1, 103) = 8.36, p < .01$ ; and men reported making more controllable relationship attributions than women ( $M_s = 28.48$  vs.  $27.74$ , respectively),  $F(1, 103) = 4.20, p < .05$ . These main effects were qualified by a marginally significant Parental Status x Gender interaction  $F(1, 103) = 3.02, p = .08$ . Women who did not have children made significantly fewer controllable relationship attributions ( $M = 24.00$ ) than both women who were parents ( $M = 28.46$ ),  $t(60) = 2.47, p < .05$ ; and men who were parents ( $M = 28.48$ ),  $t(48) = 2.35, p < .05$ ; but did not differ in controllable attributions from men who were not parents ( $M = 28.50$ ),  $t(14) = 1.68, ns$ .

A significant main effect for parental status was also found for secondary control:

parents had greater secondary control than non-parents ( $M_s = 36.78$  vs.  $32.25$ , respectively), regardless of their gender,  $F(1,102) = 3.84, p = .05$ . No other significant main or interaction effects were found for any of the other relationship perceptions.

*Impact of children living at home.* The “empty nest” effects on relationship perceptions were also examined by comparing relationship perceptions among individuals who still have children living with them versus those who have an “empty nest” in 2 (children at home vs. empty nest) x 2 (male vs. female) ANCOVAs. Although there were no significant main effects, a significant Gender x Child at Home/Empty Nest interaction was found for secondary control,  $F(1, 86) = 5.67, p < .05$ . Women who had children living with them had significantly less secondary control ( $M = 33.55$ ) than both men who had children living with them ( $M = 38.92$ ),  $t(57) = 2.86, p < .01$ ; and women who had an “empty nest” ( $M = 39.35$ ),  $t(48) = 2.89, p < .01$ ; but did not differ in secondary control from men who had an “empty nest” ( $M = 37.27$ ),  $t(46) = 16.61, ns$ .

A significant main effect was found for gender on uncontrollable attributions where women made fewer uncontrollable attributions than men did ( $M_s = 10.00$  vs.  $12.13$ , respectively),  $F(1, 89) = 4.57, p < .05$ ; but this main effect was qualified by a significant Gender x Child at Home/Empty Nest interaction,  $F(1, 89) = 7.94, p < .01$ . Women who had children living with them made significantly fewer uncontrollable relationship attributions ( $M = 9.08$ ) than the other three groups: men living with children ( $M = 12.48$ ),  $t(60) = 4.10, p < .001$ ; empty nest men ( $M = 11.53$ ),  $t(50) = 2.78, p < .05$ ; and empty nest women ( $M = 12.00$ ),  $t(52) = 3.78, p < .001$ .

*Working vs. retirement.* Finally, the effects of retirement were assessed by comparing retired versus working individuals on relationship perceptions in a 2 (working

vs. retired) x 2 (male vs. female) ANCOVA analysis. No significant main or interaction effects were found for any of the relationship perceptions in the current study.

### Discussion

Overall, Study 2 participants saw themselves as playing an “active” role in their romantic relationships. They perceived themselves as at least partly responsible for relationship outcomes, having the capacity to influence various outcomes and the competency to deal with potential relationship challenges, as reflected in their high ratings of controllable attributions, primary relationship control, and efficacy. Notably, participants rated their relationships as highly satisfying and loving, even after being in the relationship for as long as 50 years in some cases. This suggests that high levels of satisfaction and love are due to more than being in a new relationship or “young and in love.” In fact, the findings that length of relationship predicted relationship satisfaction and love in the current study indicate that satisfaction and love actually increase as relationships progress over time. Thus, whether individuals have been in their relationship for one or 50 years, they may perceive that relationships as highly satisfying and loving, as was the case in Study 1 where individuals were only in their relationships for an average of 18 months, and in Study 2 where most individuals were in their relationships considerably longer (average of 17+ years).

### *Replication*

The main purpose of Study 2 was to examine various relationship perceptions among individuals who represent a significant range of the adult life span (i.e., 60 years) in order to determine whether findings among Introductory Psychology students (Study 1) would replicate in a wider population of adults involved in various types (e.g., dating,

cohabiting, marital) of romantic relationships. Similar to the finding that satisfaction and love are due to more than merely being in a new relationship or “young and in love”, several findings among the younger participants in Study 1 were also found among older individuals in longer relationships. These replicated findings are subsequently discussed.

*Relationship attributions and perceived control.* Consistent with Study 1, the more controllable and fewer uncontrollable relationship attributions Study 2 participants made, the more control they felt they had over relationship outcomes. This pattern of findings indicates that perceived contingency between individuals’ actions and outcomes are associated with increases or decreases in perceptions of primary control within the context of romantic relationships, not just among younger adults, but across the adult life span. Conversely, and consistent with Study 1, secondary relationship control was positively correlated with uncontrollable relationship attributions, supporting the notion that individuals may rely on changing their inner cognitions to adjust to subjectively uncontrollable aspects of their relationship. Also similar to Study 1, perceptions of primary and secondary relationship control in Study 2 appear to be independent of one another, allowing individuals to perceive themselves as having any combination of primary and secondary control in their romantic relationships.

*Efficacy.* The Study 1 correlations between relationship efficacy and primary and secondary control were replicated in Study 2. As expected (Bandura, 1982), the more primary relationship control individuals believed they had, the more efficacious they felt in dealing with relationship issues. Conversely, secondary control was again negatively associated with relationship efficacy. Thus, individuals must perceive themselves as having a direct influence within the relationship in order to judge themselves as effective

in handling challenges that may arise. Moreover, simply adjusting one's internal relationship expectations may actually reduce feelings of relationship efficacy. Alternately, feeling unable to resolve certain relationship challenges (low efficacy) may lead individuals to lower their own expectations in attempt to retain a sense of relationship control. Finally, a third variable, such as past relationship experiences may cause individuals to have lower efficacy and greater secondary control. In sum, the fact that the associations among relationship attributions, perceived control, and efficacy from Study 1 were replicated in Study 2, indicates that they apply to a range of adult romantic relationships, beyond those existing among Introductory Psychology students.

*Optimism.* As in Study 1, the current study also determined whether individuals' general positive expectations related to how they viewed their relationships by examining the correlations between dispositional optimism and relationship perceptions. Consistent with Study 1 and other research (e.g., Fitzgerald et al., 1993), individuals who had a general expectation that good things would happen also felt they had more influence over relationship outcomes and a greater sense of relationship efficacy compared to less optimistic individuals. Thus, the notion that positive expectations and a sense of influence and competency go hand in hand (Scheier & Carver, 2003) was supported in the current study, as it was in Study 1. Furthermore, participants with greater positive expectations made fewer uncontrollable attributions and had lower levels of secondary relationship control. As suggested in Study 1 (see Discussion section), these negative associations may be because individuals who have a positive association between primary control and optimism may also rely on primary control more so than secondary control (Klein & Helweg-Larsen, 2002). Together, these findings indicate that

dispositional optimism plays a significant role in relationship perceptions among adults in both new and longer-term romantic relationships.

*Satisfaction.* Regarding relationship attributions and satisfaction, the pattern of results in the current study was consistent with Study 1: although controllable attributions were not associated with satisfaction, making uncontrollable attributions was associated with less relationship satisfaction. In contrast, greater levels of primary control, efficacy, love, and dispositional optimism were associated with greater relationship satisfaction. Although relationship satisfaction and secondary control were negatively related in both studies, this relationship was not significant in Study 2. Thus, keeping this one exception in mind, the associations with relationship satisfaction from Study 1 were replicated in Study 2, suggesting that relationship attributions, perceived control, efficacy, and dispositional optimism are all involved in relationship satisfaction across the adult life span.

Also as in Study 1, regression results revealed that greater perceptions of primary control and efficacy predicted more satisfying relationships among participants in Study 2, indicating that these two relationship perceptions predict satisfaction consistently across a variety of adult romantic relationships. Participants' ethnicity and length of relationship also predicted their relationship satisfaction, where being European/Caucasian, and in a longer relationship were associated with more satisfying relationships. These demographic predictors were not significant in Study 1, likely because the sample (Introductory Psychology students) was fairly homogenous in terms of their length of relationship and ethnicity.

As in Study 1, participants in Study 2 were categorized into discreet groups of

primary and secondary control (i.e., low/low, high/low, low/high, and high/high) to examine the combined effects on relationship satisfaction. Consistent with Study 1, individuals with high primary relationship control were more satisfied with their relationship than were their low primary control counterparts and individuals with high secondary control were less satisfied with their relationship than those with low secondary control. Interestingly, and unlike Study 1, a significant Primary Control by Secondary Control interaction indicated that participants with low primary/high secondary relationship control had significantly less satisfying relationships than the other three groups. This pattern of results contrasts those from Study 1 where low primary control or high secondary control each predicted lower satisfaction regardless of the level of the other type of control. This additional Primary x Secondary Control interaction found in Study 2 may suggest that the *combination* of primary and secondary relationship control that individuals possess becomes increasingly important as individuals age and are in longer, and often more serious relationships. That is, among Study 2 participants, having low primary control was more detrimental to their relationship satisfaction when paired with high secondary control than when it was paired with low secondary control. Similarly, high secondary control predicted lower satisfaction when paired with low rather than high primary control.

As is evident in several results from both studies, having a sense of primary control is optimal in relationships. Among individuals with high primary control having either low or high secondary control did not influence their relationship satisfaction, perhaps because these individuals rely more heavily on their primary control perceptions and directly influence their relationship, making their level of secondary control

relatively unimportant. For instance, individuals who perceive themselves as having the capacity to actively deal with relationship issues (high primary control) would not need to accept such relationship issues or lower their expectations of the relationship (secondary control) because they feel able to change certain aspects of that relationship. As such, their capacity to accept or internally adjust to less desirable aspects of the relationship would be irrelevant if they feel they can directly improve those aspects. Thus, secondary control appears to only become an issue when primary control is low.

Aside from a greater importance of the combination of primary and secondary relationship control in the current study, several of the findings from Study 1 were replicated in Study 2. This replication suggests that individuals' relationship perceptions and their associations remain fairly constant across a large range of the adult life span. This replication also suggests that findings from Study 1 are generalizable to various types of romantic relationships among individuals other than Introductory Psychology students, the majority of whom were involved in fairly new dating relationships.

#### *Age Analyses*

In addition to determining whether findings from Study 1 were replicated in Study 2, another main objective of the current study was to examine whether relationship perceptions varied as a function of participants' age. Notably, Study 2 results revealed that many participants reported being involved in highly satisfying and loving relationships, regardless of their age. These findings indicate that in addition to younger adults often involved in fairly new relationships, older adults generally involved in longer-term relationships can have very satisfying and loving romantic relationships.

Aside from love and satisfaction, it was expected that primary control would decrease

and secondary control would increase with age (Heckhausen & Schulz, 1998).

Surprisingly, age was not significantly associated with increased or decreased primary or secondary control. Instead, both types of relationship control appeared to be fairly stable across the adult life span represented in the current study. A possible reason for the lack of variation in primary and secondary control as a function of age is that in the current study, both primary and secondary control were measured in terms of participants' perceptions of control rather than the control strategies they engage in. Perhaps directly measuring primary and secondary control strategies would have resulted in significant increases or decreases in participants' tendency to engage in one type of strategy or the other as a function of age.

In addition to primary and secondary control perceptions, none of the other relationship perceptions assessed in the current study varied as a function of participants' age. Moreover, age was not significantly correlated with relationship attributions, primary or secondary control, efficacy, optimism, or satisfaction. Thus, it appears that age does not significantly influence individuals' perceptions of their relationships. Other factors that may play a role in individuals' relationship perceptions include certain life events such as marriage, parenthood, retirement, or an "empty nest." The influence of these life events were examined in the current study and are subsequently discussed.

#### *Life Events Analyses*

The third objective of the current study was to determine whether certain important life events influence individuals' relationship perceptions. In particular, marriage, parenthood, retirement, and an "empty nest" are significant life events that may affect how individuals perceive their relationships. The impact of each of these life

events is discussed below.

*Marriage.* The first life event considered in Study 2 was marriage. Specifically, accounting for both gender and age, married participants were compared to unmarried participants to determine whether marriage influenced their relationship perceptions. Notably, being married did not significantly predict relationship satisfaction or love for either gender. That is, married men and women did not report higher or lower levels of love and satisfaction compared to non-married men and women. Thus, contrary to the previously common belief that marriage can be negative for women relative to men (Gove & Tudor, 1973; Radloff, 1975), this was not the case in the current study: married women reported having levels of satisfaction and love in their relationships that were similar to single women and single and married men. Interestingly, however, being married (relative to unmarried) was associated with less secondary relationship control among women. A possible explanation for this difference in secondary control between married and unmarried women is that relying on secondary control perceptions (e.g., accepting relationship problems or internally adjusting) may partly prevent some women from either entering or maintaining marital relationships. For instance, a women making internal adjustments in a relationship may lead her partner to misinterpret her lack of action as apathy, thus creating an obstacle to taking the relationship a step further (i.e., marriage). Alternately, marriage itself may lower women's secondary control perceptions over time as they perhaps find it unnecessary to rely on such control perceptions and instead find other, more direct means to deal with relationship issues. Finally, it is possible that a third factor, such as passiveness or introversion contributed to both women's secondary control perceptions and their likelihood of being involved in marital

relationships. Regardless of whether being married influences women's secondary control perceptions, whether secondary control perceptions influence women's likelihood of being married, or whether a third factor influences both, it is important to note that being married relative to unmarried was associated with lower secondary control among women, which may also indicate involvement in more loving and satisfying relationships.

*Parental status.* The second major life event examined in the current study was parental status. Similar to marriage, parental status did not influence relationship satisfaction or love for either gender. That is, men and women who were parents did not differ in their levels of love and satisfaction compared to non-parents. Results did reveal that women who did not have children made significantly fewer controllable relationship attributions than both women who were parents and men who were parents. A possible explanation for this finding is that attributing relationship outcomes to uncontrollable causes may partly decrease the likelihood of some women becoming parents. That is, believing that successes and failures in one's romantic relationship are uncontrollable may cause some women to think twice about bringing children into a relationship that is beyond their control. It is certainly plausible that believing one's romantic relationship could potentially end and that there is nothing they can do to stop it would prevent some women from even considering becoming a parent. An alternate explanation is that becoming a parent results in some women making more controllable attributions in their relationship. Perhaps these parents feel that they are responsible for outcomes involving their children and this sense of responsibility extends into other aspects of their lives, increasing their belief that their romantic relationship is whatever they make of it.

Finally, a third factor, such as ability to conceive may be responsible both for women's likelihood of being a parent and their controllable relationship attributions. Obviously whether or not a woman can physically have children would affect her likelihood of becoming a parent. Moreover, if a woman is physically unable to have children (something that is objectively uncontrollable), she may also attribute other aspects of her life, such as her romantic relationship to uncontrollable factors.

A significant main effect for parental status was also found on secondary control where parents had greater secondary control than non-parents, regardless of their gender. Being a parent is generally associated with greater responsibilities and demand for attention to raising children, attention and effort which is often taken away from individuals' romantic relationships. As such, parents may have greater secondary control than non-parents because they lack the time or energy to invest in actively dealing with relationship issues. In this sense, parents may temporarily put certain relationship issues "on hold" so they can focus their energies on their children. Thus, it may be easier to accept the relationship as it is rather than to actively attempt to maintain or improve it.

*Impact of living with children.* A third important life event assessed in the current study was whether parents had children living with them or had what is commonly referred to as an "empty nest." As with marriage and parental status, having a child still living at home did not influence satisfaction or love in participants' relationships, reflected in the similarity in ratings of love and satisfaction between individuals with children at home and those with an "empty nest." Interestingly, women who had children living with them made significantly fewer uncontrollable attributions and had less secondary control than both men who had children living with them and women who had

an “empty nest.” Perhaps out of necessity associated with being a mother, this group of women may have had an overall “take charge” perspective in all aspects of their lives, including their romantic relationships. However, women with children at home were not any higher in primary control or efficacy beliefs than the other three groups, suggesting that they did not perceive themselves as having more control or competency in dealing with their relationships than the other groups. Thus, it is possible that factors other than those measured in the current study may account for these differences in uncontrollable attributions and secondary control among women who have children living with them.

### *Summary of Study 2*

Together, the current findings indicate that results from Study 1 were largely replicated, thus, relationship perceptions among Introductory Psychology students extend to a wide range of the adult life span and a variety of romantic relationships (dating, marital, co-habiting) represented in Study 2. Although initially considered as a potential predictor of relationship perceptions, age had no bearing on participants’ relationship attributions, perceptions of control, efficacy, optimism, satisfaction, or love. Conversely, various life events were associated with differences in certain relationship perceptions, especially among women. Generally speaking, being married and having children living with them was associated with making more controllable and fewer uncontrollable relationship attributions and lower levels of secondary control. Whether experiencing these life events contributed to relationship perceptions or relationship perceptions influenced the likelihood of experiencing certain life events, or whether other variables determined both, it is evident that certain life events are associated with differing relationship perceptions, especially among women. It is also important to realize,

however, that none of these life events impacted relationship satisfaction or love, suggesting that individuals who get married, become a parent, or having an empty nest can still be involved in highly satisfying and loving romantic relationships.

### General Discussion

#### *Summary of the Current Findings*

In addition to factors such as physical chemistry or passion, it is likely that many romantic relationships are satisfying as a result of perceiving oneself as an active participant who invests a considerable amount of effort into one's relationship. A positive outlook may also contribute to satisfying relationships. As such, a main objective of the current studies was to examine relationship attributions, perceived control, efficacy, and optimism as predictors of relationship satisfaction. Generally, making controllable attributions toward the relationship, having a sense of primary control and efficacy, and greater dispositional optimism were associated with greater relationship satisfaction, supporting the notion that active participation in one's relationship paired with a positive outlook makes for a more satisfying relationship. This notion was further supported by the fact that making uncontrollable attributions toward the relationship and greater secondary control (e.g., passive acceptance or changing own expectations) were associated with less satisfying relationships.

Moreover, the associations between relationship perceptions and satisfaction were examined while accounting for various demographic differences between individuals, including their age, gender, length of relationship, ethnicity, and religious beliefs. Interestingly in Study 1, relationship perceptions were stronger predictors of satisfaction than were any of the demographic variables examined. Greater primary

control and efficacy predicted more satisfying relationships in both studies. In contrast, secondary control negatively predicted relationship satisfaction in Study 1. Importantly, relationship efficacy, or feeling competent in one's ability to successfully deal with relationship challenges, was by far the strongest indicator of relationship satisfaction, both initially in Study 1 and 2, and five months later in Study 1. Thus, the current studies support the idea that viewing oneself as playing an active role in one's relationship, able to successfully deal with various challenges that arise, contributes to a satisfying romantic relationship.

Another major focus of Study 1 was to identify which relationship perceptions predicted whether individuals maintained or ended their relationships over a five-month period. Relationship-specific controllable and uncontrollable attributions, primary and secondary control, efficacy, optimism, satisfaction, and love were examined as predictors of relationship longevity. Relationship efficacy and secondary control significantly predicted whether individuals' relationships lasted. That is, regardless of various demographic differences and other relationship perceptions, less secondary control and a greater sense of efficacy were associated with longer-lasting relationships. Thus, viewing oneself as competent to *directly* deal with relationship issues rather than relying on changing one's own internal expectations or simply accepting aspects of the relationship, not only leads to more satisfying relationships, these perceptions also largely determine whether such relationships will last over time. Not surprisingly and consistent with past research, individuals who maintained their relationships, compared to those who ended their relationships, also reported more love and satisfaction in their relationships five months earlier.

A third major objective exclusive to Study 2 was to determine whether relationship perceptions vary as a function of age or various life events. To achieve this objective, relationship attributions, perceived control, efficacy, optimism, satisfaction, and love were examined cross-sectionally among individuals ranging from 17 to 77 years of age involved in different types of romantic relationships (e.g., dating, co-habiting, marital). Interestingly, relationship perceptions do not appear to vary as a function of age, as participants in Study 2 were similar in their relationship perceptions to participants in Study 1, who were mostly in their late teens or early twenties. Specifically, as in Study 1, primary control, efficacy, and optimism were associated with more satisfying relationships whereas uncontrollable attributions and secondary control were associated with less satisfying relationships in Study 2, suggesting that individuals' relationship perceptions and the associations between those perceptions remain fairly constant across the adult life span.

Although age did not influence relationship perceptions in the current studies, findings from Study 2 indicate that certain life events do play an important role, particularly among women. For instance, being married was associated with lower levels of secondary control among women. Moreover, women who had children living with them made more controllable and fewer uncontrollable relationship attributions and had lower levels of secondary control. Both men and women who were parents, however, had higher levels of secondary control compared to non-parents. Although, unable to discern whether experiencing life events such as marriage or parenthood contribute to relationship perceptions or whether relationship perceptions influence the likelihood of experiencing such life events (or whether other variables determined both), Study 2

provides evidence that certain life events are associated with differing relationship perceptions, the exception being love and satisfaction, which did not differ as a function of being married or single, parents or non-parents, or having children living at home or an empty nest.

### *Implications of Findings*

The results of the current studies have important implications for both relationship researchers and individuals involved in romantic relationships. First, these studies indicate that relationship satisfaction is associated with several relationship perceptions. In particular, believing that one has the capacity to influence outcomes in one's relationship as well as the competency to successfully deal with various relationship challenges may make a relationship more satisfying. As such, individuals who are involved in romantic relationships may want to maximize their perceptions of primary control and efficacy in their relationship. This may be partly achieved by making more controllable rather than uncontrollable attributions for relationship outcomes (e.g., "Whether this relationship problem gets solved depends on my own efforts" rather than "Luck will determine whether we work this out"), and by focusing on past instances where previous relationship challenges were successfully resolved. These cognitive strategies may enhance primary control and efficacy perceptions, resulting in a more satisfying relationship. It would also be useful for researchers to acknowledge the role of primary control perceptions and judgments of efficacy when assessing relationship satisfaction in their research. Aside from more commonly assessed predictors such as commitment, passion, intimacy, and trust, researchers should also consider whether romantic partners see themselves as having the capacity to influence relationship

outcomes and the ability to successfully handle relationship challenges. These additional considerations would allow researchers to obtain a more complete representation of what constitutes a satisfying romantic relationship.

Another important contribution of the current research is the fact that two types of relationship control perceptions were assessed in both studies. Primary control, the capacity to directly influence relationship outcomes, and secondary control, changing internal thoughts and expectations pertaining to the relationship, were examined separately, and in combination, as predictors of relationship satisfaction and longevity. Traditionally, having high levels of both primary and secondary control was considered to be optimal as this combination allows individuals to switch between primary and secondary control as necessary. Surprisingly, however, secondary control perceptions were found to be detrimental in the context of romantic relationships. That is, secondary control predicted less satisfying relationships and individuals with greater secondary control were less likely to still be in their relationship five months later than those with less secondary control. When combined with primary control perceptions, high levels of secondary control were especially harmful when primary control perceptions were low. Conversely, when primary control perceptions were high, the negative effects of secondary control were nullified, suggesting that having access to both types of control, individuals may choose to rely more heavily on primary control perceptions. These findings are useful to individuals in relationships, who may want to challenge secondary control beliefs such as “we’ll work things out if we’re meant to” or the relationship is “as good as it gets” and to decide whether “letting things go” is really their best option. Instead, such individuals may want to actively attempt to alter less desirable aspects of

their relationships and directly confront negative issues because even if they are not successful, simply doing nothing appears to be detrimental to relationships.

A third contribution of the current studies is the finding that certain life events, particularly marriage and parenthood may influence or be influenced by relationship perceptions, such as relationship attributions and secondary control. Thus, individuals who are considering getting married or having children should pause to consider how such events may affect the way they perceive their relationship. Alternately, the way that some individuals perceive their relationship may influence their likelihood of getting married or choosing to become parents. As such, individuals may need to revisit their relationship perceptions to determine whether such perceptions are conducive to getting married or becoming a parent. For instance, some individuals may decide against bringing a child into a relationship that they believe is completely beyond their control. In any case, both researchers and individuals involved in romantic relationships need to be aware that certain relationship perceptions may influence and be influenced by significant life events such as marriage, parenthood, or an “empty nest.”

Finally, it is important to note that each of the above implications apply to a wide range of the adult life span and a variety of different romantic relationships. Although samples of university students are often criticized as being too selective and thus, unrepresentative of a more general adult population, this problem does not apply to the current studies. That is, findings among younger adults in Study 1 were largely replicated among a broader range of young, middle-aged, and older adults in dating, cohabiting, and marital relationships across Canada in Study 2. Moreover, in both studies, there was a considerable amount of variability in participants' relationship perceptions, as evident in

the range of responses for each relationship perception (see Tables 1.1 and 2.1). This diversity in relationship perceptions suggests that self-selection was not an issue in either of the current studies. Specifically, rather than only those individuals who were involved in highly satisfying, loving relationships, individuals with various levels of relationship love and satisfaction participated in the current studies. Thus, the pattern of findings regarding relationship perceptions, their associations, and their ability to predict relationship satisfaction and longevity in the current studies, are likely to be similar to those among Canadian adults of various ages in various types of romantic relationships.

#### *Suggestions for Future Research*

Although these studies made several significant contributions to relationship research and have important implications for individuals involved in romantic relationships, there are ways that future research can build upon the current findings. First, the current studies only assessed one partner's relationship perceptions. As such, future research could benefit from including both partners' relationship assessments in order to obtain a more rounded representation of their romantic relationship and to determine whether both partners view their relationship in a similar manner (e.g., similar levels of satisfaction). Moreover, including both partners in future studies would allow for examination of which primary and secondary control combinations are optimal in a relationship. For instance, it could be determined whether an individual with high primary control and low secondary control is compatible with a low primary control/high secondary control partner, or whether similar control perceptions are preferred (e.g., both partners high in primary and low in secondary control). A related benefit to including both partners in future research would be the opportunity to re-visit individuals

who are low in both primary and secondary relationship control and attempt to determine how they are able to be satisfied in their relationship without a sense of control. Perhaps such low-control individuals are paired with partners who are high in both types of control and thus, low control in one partner is compensated by high control in the other partner. This possibility is certainly feasible considering that in romantic relationships, more so than any other type of dyadic relationships, partners tend to form a shared identity, at least to some extent. As such, having a partner who is high in both types of control may be sufficient to sustain one's own sense of control in the relationship. In any case, including both partners would greatly contribute to future relationship research by addressing several of the issues raised in the current studies.

The current research could also be extended in terms of the composition of the primary and secondary relationship control measures. Specifically, these studies included measures of primary- and secondary-control *perceptions* or beliefs rather than *strategies* that individuals actually engage in within their romantic relationships. Including measures of primary- and secondary-control strategies in future research would provide additional insight into the types of control strategies that individuals use within their relationships. For example, such research would be able to determine whether individuals rely more on primary-control strategies such as asking their partner to discuss troubling issues, or whether they rely more on secondary-control strategies such as changing the way they think about the relationship, or whether they tend to use a combination of both types of control strategies. This vein of research would also provide the opportunity to have individuals specify which type of strategies they prefer to use in certain situations and the reason for their preference. This information would be useful in

identifying circumstances that elicit individuals to engage in primary- versus secondary-control strategies.

Another way in which future research could extend the current studies concerns perceptions of secondary relationship control which were generally found to be detrimental to romantic relationships in both Studies 1 and 2. Control research identifies various types of secondary control and the literature remains somewhat unclear as to the number of possible types of secondary control. The current studies included a measure of secondary control perceptions that consisted of acceptance and changing internal expectations. By examining other types of secondary control perceptions such as vicarious or interpretive control, future research could determine whether additional types of secondary control perceptions are equally negative in romantic relationships as were the perceptions of secondary control assessed in the current research.

A final suggestion for future research is to measure relationship perceptions assessed in the current studies multiple times over an extended period. For instance, having individuals record their relationship perceptions and level of satisfaction once a month for one year would allow for examining how such perceptions change over time or whether they remain fairly stable. Such a method would improve upon the current studies in which relationship perceptions were only assessed at two points in time.

Together, the findings from the current studies indicate that viewing oneself as having the capacity to influence relationship outcomes (primary control) and the competency to successfully handle relationship challenges (efficacy) is associated with a more satisfying relationship. Conversely, making internal adjustments (secondary control) in attempt to deal with relationship issues may signal a troubled relationship.

Regardless of whether higher secondary control contributes to a less satisfying relationship, whether a less satisfying relationship leads individuals to rely more heavily on secondary control, or whether a third factor such as low efficacy causes less satisfaction and greater reliance on secondary control, perceptions of secondary control do not appear to be helpful in making a relationship satisfying or lasting. In conclusion, individuals with high perceptions of relationship efficacy can have satisfying, loving, and lasting relationships regardless of their age, how long they have been in the relationship, or whether they have experienced various life events such as marriage, parenthood, an empty nest, or retirement.

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## Appendix I

## Demographics

1. How long (in months) have you been in your current relationship?

- |                        |                          |
|------------------------|--------------------------|
| (1) less than 3 months | (6) 25-30 months         |
| (2) 3-6 months         | (7) 31-36 months         |
| (3) 7-12 months        | (8) 37-42 months         |
| (4) 13-18 month        | (9) 43-48 months         |
| (5) 19-24 months       | (10) more than 48 months |

2. Have you ever had a serious romantic relationship prior to your current relationship?

- (1) yes
- (2) no

3. Are your parents married, divorced or separated?

- |               |              |
|---------------|--------------|
| (1) married   | (2) divorced |
| (3) separated | (4) other    |

4. If your parents are married, do they have a good relationship with one another?

- (1) yes
- (2) no
- (3) my parents are not currently married

5. What is your gender?

- (1) Female
- (2) Male

6. What is your age in years and months? (Select the number closest to your actual age).

- |                        |                                    |
|------------------------|------------------------------------|
| (1) 17years, 6 months  | (6) 18 years, 9 months             |
| (2) 17 years, 9 months | (7) 19 years                       |
| (3) 18 years           | (8) 19 years, 3 months             |
| (4) 18 years, 3 months | (9) 19 years, 6 months             |
| (5) 18 years, 6 months | (10) Older than 19 years, 6 months |

7. Age Part 2: What is your age in years and months?

- |                                     |                                    |
|-------------------------------------|------------------------------------|
| (1) Younger than 19 years, 6 months | (6) 20 years, 9 months             |
| (2) 19 years, 9 months              | (7) 21 years                       |
| (3) 20 years                        | (8) 21 years, 3 months             |
| (4) 20 years, 3 months              | (9) 21 years, 6 months             |
| (5) 20 years, 6 months              | (10) Older than 21 years, 6 months |

8. Do you consider English to be your first language?

- (1) Yes                      (2) No

9. Were you born in Canada?

- (1) Yes                      (2) No

10. Were your parents born in Canada?

- (1) Yes                      (2) No

11. With which of the following ethnic/racial groups (defined by geographical location)

do you most feel a shared ancestral self-identity? (Select one only)

- |  |                      |
|--|----------------------|
| (1) European/Caucasian descent ("white") | (6) Middle Eastern   |
| (2) Aboriginal North American            | (7) African          |
| (3) East Indian                          | (8) Central American |
| (4) Asian                                | (9) South American   |
| (5) Polynesian                           | (10) Australian      |

12. Do you still live at home with your parents?

- (1) Yes                      (2) No

13. How strong are your religious beliefs?

## Appendix II

## Relationship Attributions

1. How much effort my partner puts into this relationship will determine how successful it is.
2. If I want this relationship to last, I will have to put effort into making it last.
3. Luck will determine whether this relationship lasts.
4. If this relationship fails it is because I'm just not good at having relationships.
5. If this relationship is to last, my partner will have to put effort into making it last.
6. Fate will decide whether this relationship is going to last or not.
7. How much effort I put into this relationship will influence how successful it is.
8. If this relationship ends, it will be because I didn't try hard enough.
9. If this relationship ends, it will be due to bad luck.
10. If this relationship ends, it will be because my partner didn't try hard enough.

*Note.* Items 1, 2, 5, 7, 8, and 10 represent controllable relationship attributions and items 3, 4, 6, and 9 represent uncontrollable relationship attributions.

## Appendix III

## Primary Relationship Control

1. Satisfaction in this relationship depends on hard work and persistence.
2. I have a great deal of influence over the success of this relationship.
3. Much of what happens in this relationship is beyond my control.\*
4. When problems come up in this relationship, no matter what I do I can't seem to resolve them.\*
5. This relationship is whatever I make of it.
6. I see myself as largely responsible for the success of this relationship.
7. I often feel that the success of this relationship is determined by things beyond my control.\*
8. How successful this relationship is depends on the "luck of the draw."\*\*
9. Giving my best in this relationship makes little difference in the long run.\*
10. There is little I can do about whether this relationship succeeds or fails.\*
11. Things that happen in this relationship are largely determined by me.
12. When things go wrong in this relationship, it's usually because I haven't put in much effort.
13. There is little I can do to avoid difficulties in this relationship.\*
14. Much of what has happened in this relationship so far is my own doing.

\* indicates reversed coded items.

## Appendix IV

## Secondary Relationship Control

1. When things are going poorly in this relationship, the key is to think about things in a different way.
2. There is no point in worrying too much about this relationship because things can always change unexpectedly.
3. This relationship is either meant to be or it's not.
4. For this relationship to succeed, I must accept the fact that it will not always be as satisfying as it could be.
5. Some people are just naturally good at having successful relationships, and it's okay that there is little I can do to change my ability to have a successful relationship.
6. When I am not satisfied with this relationship, adjusting my expectations helps.
7. Whether this relationship lasts will depend on fate or chance.
8. Accepting that no relationship is perfect makes this relationship more satisfying.
9. Although things may go wrong in this relationship, other relationships are worse than my own.
10. My partner and I will work out our differences if we're meant to.

*Note.* The following four items were removed from the original SRCS: No matter how bad things may get, I believe that eventually this relationship will improve; When my partner and I argue, I see it as an opportunity to improve the relationship; When this relationship is failing, I try to see how I can "turn it around" and benefit from it; I try to focus only on the positive aspects of this relationship and avoid thinking about the negative aspects.

## Appendix V

## Relationship Efficacy Scale

1. When I make plans regarding this relationship, I am certain I can make them work.
2. One of my problems is that I do not deal with problems in this relationship when I should.\*
3. If I can't solve a problem in this relationship the first time, I keep trying until I can.
4. When I have important expectations for this relationship, they rarely come true.\*
5. When issues come up in this relationship, I usually give up before they're resolved.\*
6. When difficulties come up in this relationship, I avoid facing them.\*
7. When something in this relationship becomes too complicated, I don't bother trying to work it out.\*
8. If there is something unpleasant in this relationship to deal with, I stick to it until it is resolved.
9. When new challenges come up in this relationship, I soon give up if I'm not initially successful.\*
10. When unexpected problems occur in this relationship, I don't handle them well.\*
11. Failure in this relationship just makes me try harder.
12. I feel insecure about my ability to make decisions in this relationship.\*
13. I am capable of dealing with most problems that come up in this relationship.

\* indicates reverse coded items.

Table 1.1

*Study 1: Descriptive Statistics*

<i>Measure</i>	<i># of items</i>	<i>Possible Range</i>	<i>Test-retest reliability</i>	<i>Time 1</i>				<i>Time 2</i>			
				<i>M</i>	<i>SD</i>	<i>Range</i>	<i>α</i>	<i>M</i>	<i>SD</i>	<i>Range</i>	<i>α</i>
Controllable											
Attributions	6	6 to 42	.59	26.24	6.07	6 to 42	.74	26.14	5.72	9 to 42	.74
Uncontrollable											
Attributions	4	4 to 28	.48	8.27	3.62	4 to 21	.63	8.64	4.04	4 to 23	.78
Primary Control	14	14 to 98	.46	68.17	8.88	30 to 92	.63	69.79	8.31	50 to 89	.72
Secondary Control	10	10 to 70	.61	40.63	8.83	14 to 65	.69	38.79	8.37	16 to 65	.72
Efficacy	13	13 to 91	.65	68.89	11.33	25 to 91	.84	68.88	10.17	43 to 91	.82
Optimism	6	6 to 42	.74	29.11	6.17	7 to 41	.76	29.81	5.92	11 to 42	.78
Satisfaction	7	7 to 49	.62	0.24	7.34	14 to 49	.89	41.59	5.97	23 to 49	.85
Love	36	36 to 252	.66	205.53	35.71	78 to 252	.97	214.58	28.31	116 to 252	.96

*Note.* With the exception of dispositional optimism, all measures are relationship-specific. Only responses of participants who were still in their relationship at Time 2 were included in Time 2 descriptive statistics and test-retest reliability analyses.

Table 1.2

*Study 1: Significant Gender Differences Between Means for Relationship Perceptions*

<i>Measure</i>	<i>Gender</i>	<i>n</i>	<i>M</i>	<i>t</i>
<i>Time 1</i>				
Controllable Attributions	Women	293	25.66	-2.93**
	Men	137	27.48	
Secondary Control	Women	295	40.10	-1.93 <sup>+</sup>
	Men	138	41.85	
Satisfaction	Women	294	40.70	1.89 <sup>+</sup>
	Men	137	39.26	
Love	Women	280	209.71	3.39**
	Men	135	196.61	
<i>Time 2</i>				
Love	Women	142	217.27	1.87 <sup>+</sup>
	Men	56	207.75	

*Note.* Each of the above measures refer specifically to participants' current romantic relationship.

<sup>+</sup> $p = .06$ .      \* $p < .05$ .      \*\* $p < .01$ .

Table 1.3

*Study 1: Significant Ethnicity Differences Between Means for Relationship Perceptions*

<i>Measure</i>	<i>Ethnicity</i>	<i>Time 1</i>			<i>Time 2</i>		
		<i>n</i>	<i>M</i>	<i>t</i>	<i>n</i>	<i>M</i>	<i>t</i>
Uncontrollable Attributions	European/Caucasian	351	8.07	-2.12*	171	8.11	-3.14**
	Non-European/Caucasian	86	9.10		38	11.03	
Primary Control	European/Caucasian	343	68.66	2.36*	166	70.58	2.95**
	Non-European/Caucasian	83	66.19		37	66.22	
Secondary Control	European/Caucasian	349	39.86	-3.71***	169	38.02	-2.87*
	Non-European/Caucasian	86	43.74		37	42.30	

*Note.* Each of the above measures refer specifically to participants' current romantic relationship.

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

Table 1.4

*Study 1: Time 1 Bivariate Correlations for All Participants*

<i>Measure</i>	1	2	3	4	5	6	7	8	9	10	11
1. Primary Control	-	-.06	.23**	.26**	-.26**	.11 <sup>+</sup>	.24**	.19**	.06	.02	.05
2. Secondary Control		-	-.19**	.28**	.40**	-.14**	-.22**	-.16*	-.01	.03	.09
3. Efficacy			-	-.07	-.38**	.30**	.53**	.54**	.01	-.01	-.08
4. Controllable Attributions				-	.11 <sup>+</sup>	.01	-.09	-.04	.08	.02	.14*
5. Uncontrollable Attributions					-	-.19**	-.29**	-.25**	-.06	-.01	.05
6. Dispositional Optimism						-	.21**	.11 <sup>+</sup>	-.01	.01	-.01
7. Satisfaction							-	.80**	.02	-.05	-.09
8. Love								-	.15*	.01	-.17**
9. Length of Relationship									-	.33**	-.12*
10. Age										-	.02
11. Gender											-

<sup>+</sup>*p* < .05.\**p* < .01.\*\**p* < .001.

Table 1.5

*Study 1: Bivariate Correlations for Men and Women Separately (correlations for women in parentheses)*

<i>Measure</i>	1	2	3	4	5	6	7	8	9
1. Primary Control	-	.00 (-.10)	.41** (.13 <sup>+</sup> )	.29* (.24**)	-.42** (-.17*)	.39** (-.05)	.40** (.16*)	.26* (.15 <sup>+</sup> )	.06 (.06)
2. Secondary Control		-	-.25* (-.15**)	.30** (.26**)	.38** (.41**)	-.11** (-.16*)	-.22* (-.21**)	-.18 <sup>+</sup> (-.13 <sup>+</sup> )	-.04 (.02)
3. Efficacy			-	.18 <sup>+</sup> (-.16**)	-.50** (-.30**)	.28* (.31**)	.62** (.48**)	.62** (.48**)	.10 (-.05)
4. Controllable Attributions				-	-.01 (.17*)	.05 (-.01)	.11 (-.17*)	.19 <sup>+</sup> (-.12 <sup>+</sup> )	.06 (.10)
5. Uncontrollable Attributions					-	-.34** (-.11)	-.49** (-.17*)	-.35** (-.17*)	-.02 (-.06)
6. Dispositional Optimism						-	.35** (.15 <sup>+</sup> )	.01 (.12 <sup>+</sup> )	-.02 (-.00)
7. Satisfaction							-	.80** (.80**)	-.01 (.02)
8. Love								-	.13 (.13 <sup>+</sup> )
9. Length of Relationship									-
10. Age									

<sup>+</sup> $p < .05$ .

\* $p < .01$ .

\*\* $p < .001$ .

Table 1.6

*Study 1: Predicting Time 1 Relationship Satisfaction*

Predictors	Step 1			Step 2		
	B	$\beta$	SE	B	$\beta$	SE
<i>Demographics</i>						
Age	-.034	-.030	.063	-.043	-.038	.054
Length of Relationship	.095	.031	.169	.111	.037	.145
Gender	-.666	-.043	.824	-.341	-.022	.715
Religious Beliefs	.217	.059	.197	.007	.002	.171
Ethnicity	-.197	-.042	.253	.072	.015	.221
<i>Relationship Perceptions</i>						
Controllable Attributions				-.096	-.080	.060
Uncontrollable Attributions				-.002	-.001	.111
Primary Control				.119	.139**	.042
Secondary Control				-.060	-.074	.042
Efficacy				.284	.437***	.032
Dispositional Optimism				.079	.069	.054
$R^2$		.009			.288***	

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

Table 1.7

*Study 1: Predicting Time 1 Relationship Love*

Predictors	Step 1			Step 2		
	B	$\beta$	SE	B	$\beta$	SE
<i>Demographics</i>						
Age	-.244	-.044	.310	-.229	-.041	.266
Length of Relationship	2.301	.154**	.831	2.300	.154**	.716
Gender	-9.479	-.126*	3.996	-7.502	-.100*	3.466
Religious Beliefs	.868	.048	.968	.075	.004	.839
Ethnicity	-.187	-.008	1.223	.476	.021	1.071
<i>Relationship Perceptions</i>						
Controllable Attributions				-.002	.001	.287
Uncontrollable Attributions				-.237	-.023	.538
Primary Control				.129	.031	.209
Secondary Control				-.125	-.031	.206
Efficacy				1.610	.510***	.158
Dispositional Optimism				-.27	-.049	.264
$R^2$		.048**			.317***	

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

Table 1.8

*Study 1: Bivariate Correlations for Time 2 Participants*

<i>Measure</i>	1	2	3	4	5	6	7	8	9	10	11
1. Primary Control	-	-.11	.29**	.26**	-.41**	.27**	.23*	.20*	.09	-.05	.07
2. Secondary Control		-	-.24*	.30**	.45**	-.09	-.38**	-.15 <sup>+</sup>	.01	.04	.06
3. Efficacy			-	.01	-.42**	.31**	.60**	.56**	.02	-.01	.02
4. Controllable Attributions				-	.18*	-.08	-.10	-.03	.02	.03	.12
5. Uncontrollable Attributions					-	-.14 <sup>+</sup>	-.31**	-.21*	-.02	.11	.03
6. Dispositional Optimism						-	.25**	.18 <sup>+</sup>	.05	-.01	.01
7. Satisfaction							-	.79**	-.03	-.12	-.05
8. Love								-	-.02	-.14	-.15 <sup>+</sup>
9. Length of Relationship									-	.43**	-.12
10. Age										-	-.05
11. Gender											-

<sup>+</sup>*p* < .05.\**p* < .01.\*\**p* < .001.

Table 1.9

*Study 1: Predicting Relationship Longevity*

<i>Time 1 Predictors</i>	B	Wald Test (z ratio)	Odds Ratio	95% Confidence Interval for Odds Ratio	
				Upper	Lower
Age	0.01	0.11	1.01	1.08	0.95
Length of Relationship	0.30	9.04**	1.35	1.64	1.11
Gender	-0.05	0.02	0.95	2.09	0.43
Religious Beliefs	0.08	0.60	1.08	1.31	0.89
Ethnicity	0.24	0.19	1.28	3.80	0.43
Controllable Attributions	0.01	0.04	1.01	1.08	0.94
Uncontrollable Attributions	0.08	1.57	1.08	1.23	0.96
Primary Control	-0.02	0.95	0.98	1.02	0.93
Secondary Control	-0.06	6.37*	0.94	0.99	0.90
Efficacy	0.01	0.02	1.00	1.04	0.96
Dispositional Optimism	-0.01	0.02	1.00	1.06	0.94
Satisfaction	0.04	0.87	1.04	1.13	0.96
Love	0.02	5.82*	1.02	1.04	1.00

\* $p < .05$ .\*\* $p < .01$ .

Table 1.10

*Study 1: Mean Differences in Time 1 Relationship Perceptions for Maintained Relationships versus Ended Relationships at Time 2*

<i>Measure</i>	Relationship Longevity	<i>n</i>	<i>M</i>	<i>t</i>
Secondary Control	Maintained	208	39.49	-3.54***
	Ended	69	43.84	
Efficacy	Maintained	205	71.21	3.88***
	Ended	69	65.28	
Satisfaction	Maintained	207	42.35	6.09***
	Ended	69	35.75	
Love	Maintained	196	216.12	6.22***
	Ended	66	181.24	

*Note.* Each of the above measures refer specifically to participants' current romantic relationship.

\*\*\* $p < .001$ .

Table 1.11

*Study 1: Predicting Time 2 Relationship Satisfaction*

<i>Predictors</i>	Step 1			Step 2		
	B	$\beta$	SE	B	$\beta$	SE
Age	-.080	-.088	.076	-.106	-.116	.069
Length of Relationship	-.031	-.013	.198	.096	.041	.181
Gender	-.458	-.035	.997	-.721	-.055	.938
Religious Beliefs	-.023	-.008	.228	-.128	-.043	.207
Ethnicity	.067	.017	.311	.282	.069	.288
Controllable Attributions				.093	.099	.074
Uncontrollable Attributions				.182	.097	.149
Primary Control				.007	.009	.055
Secondary Control				-.177	-.258**	.053
Efficacy				.199	.355***	.043
Dispositional Optimism				.061	.063	.069
$R^2$		.010			.225***	

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

Table 1.12

*Study 1: Predicting Time 2 Relationship Love*

<i>Predictors</i>	Step 1			Step 2		
	B	$\beta$	SE	B	$\beta$	SE
Age	-.573	-.152*	.364	-.677	-.156*	.340
Length of Relationship	.330	.029	.966	.844	.075	.907
Gender	-7.617	-.148*	4.850	-9.503	-.151*	4.690
Religious Beliefs	.767	.054	1.104	.588	.041	1.036
Ethnicity	1.052	.054	1.489	1.270	.066	1.431
Controllable Attributions				.236	.052	.378
Uncontrollable Attributions				-.139	-.015	.755
Primary Control				-.173	-.051	.278
Secondary Control				-.190	-.058	.267
Efficacy				1.070	.404***	.209
Dispositional Optimism				-.228	-.049	.346
$R^2$		.036			.202***	

\* $p < .05$ .\*\*\* $p < .001$ .

Table 2.1

*Study 2: Descriptive Statistics*

<i>Measure</i>	<i># of items</i>	<i>Possible Range</i>	<i>M</i>	<i>SD</i>	<i>Range</i>	<i>α</i>
Controllable Attributions	6	6 to 42	27.80	5.21	11 to 42	.74
Uncontrollable Attributions	4	4 to 28	7.07	6.00	4 to 18	.64
Primary Control	14	14 to 98	71.34	9.03	42 to 91	.77
Secondary Control	10	10 to 70	37.03	8.80	12 to 67	.71
Efficacy	13	13 to 91	68.37	11.51	35 to 90	.87
Dispositional Optimism	6	6 to 42	32.05	5.38	19 to 42	.79
Satisfaction	7	7 to 49	40.87	7.27	19 to 49	.90
Love	36	36 to 252	206.71	35.67	78 to 252	.93

*Note.* Each of the above measures, with the exception of dispositional optimism, are relationship-specific.

Table 2.2

*Study 2: Bivariate Correlations for All Participants*

<i>Measure</i>	1	2	3	4	5	6	7	8	9	10	11
1. Primary Control	-	-.09	.38**	.25**	-.29**	.25*	.32**	.28*	.13	.13	.05
2. Secondary Control		-	-.31**	.14	.40**	-.17 <sup>+</sup>	-.12	-.13	-.04	-.05	.02
3. Efficacy			-	-.09	-.34**	.39**	.55**	.48**	-.07	-.12	-.16
4. Controllable Attributions				-	-.09	.02	-.07	-.01	-.04	-.06	.10
5. Uncontrollable Attributions					-	-.33**	-.26*	-.20 <sup>+</sup>	-.12	-.14	.21*
6. Dispositional Optimism						-	.34**	.20 <sup>+</sup>	.17 <sup>+</sup>	.12	-.06
7. Satisfaction							-	.85**	.07	-.03	.03
8. Love								-	.01	-.12	-.03
9. Length of Relationship									-	.90	.13
10. Age										-	.19 <sup>+</sup>
11. Gender											-

<sup>+</sup>*p* < .05.\**p* < .01.\*\**p* < .001.

Table 2.3

*Study 2: Bivariate Correlations for Men and Women Separately (correlations for women in brackets)*

<i>Measure</i>	1	2	3	4	5	6	7	8	9.	10
1. Primary Control	-	-.14 (-.06)	.52** (.31*)	.35* (.20 <sup>+</sup> )	-.28 <sup>+</sup> (-.33*)	.22 (.28*)	.30 <sup>+</sup> (.34*)	.39* (.20 <sup>+</sup> )	.05 (.17)	.05 (.17)
2 Secondary Control		-	-.40* (-.26 <sup>+</sup> )	.17 (.13)	.43* (.41**)	-.17 (-.18)	-.03 (-.17)	.02 (-.23 <sup>+</sup> )	.05 (-.10)	.10 (-.13)
3. Efficacy			-	-.03 (-.10)	-.24 <sup>+</sup> (-.38**)	.37* (.40**)	.47** (.60**)	.49** (.48**)	-.10 (-.03)	-.18 (-.05)
4. Controllable Attributions				-	-.13 (-.10)	.11 (-.03)	.01 (-.11)	.02 (-.02)	-.31 <sup>+</sup> (.07)	-.32 <sup>+</sup> (.04)
5. Uncontrollable Attributions					-	-.27 <sup>+</sup> (-.36**)	-.18 (-.34*)	-.03 (-.32*)	-.11 (-.18)	-.09 (-.25 <sup>+</sup> )
6. Dispositional Optimism						-	.25 <sup>+</sup> (.39**)	.17 (.22 <sup>+</sup> )	-.19 (.38**)	-.18 (.32*)
7. Satisfaction							-	.88** (.84**)	.02 (.09)	-.07 (-.02)
8. Love								-	.04 (-.01)	-.13 (-.10)
9. Length of Relationship									-	.88** (.91**)
10. Age										-

<sup>+</sup> $p < .05$ .

\* $p < .01$ .

\*\* $p < .001$ .

Table 2.4

*Study 2: Predicting Relationship Satisfaction among Study 2 Participants*

Predictors	Step 1			Step 2		
	B	$\beta$	SE	B	$\beta$	SE
<i>Demographics</i>						
Age	-.255	-.579**	.084	-.249	-.565**	.065
Length of Relationship	.295	.594**	.096	.276	.556**	.073
Gender	-.357	-.025	1.212	.278	.019	.964
Religious Beliefs	.125	.036	.306	.176	.050	.230
Ethnicity	-7.953	-.216*	3.116	-5.333	-.145*	2.368
<i>Relationship Perceptions</i>						
Controllable Attributions				-.143	-.109	.091
Uncontrollable Attributions				.045	.019	.192
Primary Control				.164	.199**	.060
Secondary Control				.007	.008	.060
Efficacy				.359	.536***	.050
Dispositional Optimism				.010	.074	.093
$R^2$		.116**			.536***	

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

Figure 1

*Study 2: Effects of Primary and Secondary Relationship Control on Relationship Satisfaction*

