RELATIONSHIP BELIEFS ABOUT CHANGE AND ATTACHMENT ON RELATIONSHIP PERSISTENCE

NEO HWEE CHIN

NEO HWEE CHIN

School of Humanities and Social Sciences

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ABSTRACT

Relationship beliefs and attachment styles are cognitive representations of interpersonal relationships found to contribute to the functioning, development and resolution of close relationships (Sprecher, Wenzel, & Harvey, 2008). The present study aimed to extrapolate Rogge and Bradbury's (2002) multidimensional approach to the understanding of relationship-change by exploring the construct of change that involve both intentional interventions and naturally occurring changes. Antecedents of relationship change beliefs were also explored following Bowlby's (1973) proposed model of self, other, and the potential impact of early attachment on adult romantic relationship. The current study investigated the associations between relationship beliefs and attachment, and the implications they have on relational behavior such as persistence in the relationship in the face of conflicts. Three studies were conducted. Study 1 explored the laypeople's constructs of relationship change through qualitative interviews. The responses were utilized to develop the Relationship Beliefs about Change (RBC) scale. Study 2 involved validating the RBC which was found to be a three-dimensional construct: Agent of Change (AGC), Inevitable Change (IC), and Managing Change (MC). The MC factor revealed the paradoxical effect of change beliefs on relationship behaviors of Singaporean Chinese, where effort to change is needed to prevent the relationship from changes that might lead to deterioration (as depicted in AGC and IC). Study 3 tested the integrated model that associated attachment and relationship beliefs about change with relationship persistence. Results revealed significant direct effect of adult attachment on RBC, though RBC's effect on persistence did not reach significance. The potential conflicting effects within RBC's dimensions were explored where the three components showed meaningfully different effects on relationship persistence.

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CHAPTER 1: INTRODUCTION

People involved in intimate relationships often ask each other questions such as "Will you love me forever?", "Will you love me the same way years later?", "Will our relationship last?", or "Will we be as happy and loving as now?" These questions involve the conceptualization of the nature, longevity, and quality of the relationship, which revolve around the expectation and the possibility that change might take place during the course of the relationship. Change can naturally occur as events unfold during the course of the relationship; it can also be induced by conscious effort made by the partners. The beliefs about relationship changeability might constitute an important aspect of the intimate relationship belief system, which would in turn affect relationship cognitions and behaviors (e.g., Arriaga, Reed, Goodfriend, & Agnew, 2006; Fitness, 2006; Knee, Patrick, Vietor, & Neighbors, 2004; Sprecher & Metts, 1999). The present study aims to explore the emergent adults' conception of relationship changeability and its associations with other important relationship processes contributing to the longevity and stability of intimate relationships.

Overview

People hold different ideas, beliefs and expectations about relationships, especially close relationships that are of great importance to our everyday life. This includes how the relationship might develop over time (Bierhoff & Schmohr, 2004), the potential growth and decline of relationships (e.g., Flora & Segrin, 2000), whether the relationship will succeed, and what makes relationships last (e.g., Sprecher &

Metts, 1999; Fletcher, Rosanowski, & Fitness, 1994). It has been observed that people do not enter into an intimate relationship with an empty mind; they have pre-conceived ideas about the relationship. These pre-existing beliefs arise from their culture and personal experiences during their formative years and more immediately, from their past relationship experiences.

In turn, these relationship beliefs influence the way people perceive and interpret their current relationships, informing their relationship behaviors, as well as affecting their emotional well-being (e.g., Harvey & Wenzel, 2006; Knee & Canevello, 2006; Flora & Segrin, 2000; Sprecher & Metts, 1999). As such, Antonucci, Langfahl, and Akiyama (2004) contended that social relationships are both outcomes and predictors at the same time: relationships are products of the cultural context and the developmental niche of individuals, while concurrently influencing and predicting the psychological and physical health of the individual. Cultural differences on how individuals perceive and interpret the nature and process of their relationships are apparent across relational research, such as the preferred level of interdependence (Lavy, Mikulincer, Shaver, & Gillath, 2009), social attributions (Crittenden, 1996), expectations of the outcome of relationships (Rothbaum & Tang, 1998), perceived commitment in relationships (Chang & Chan, 2007), and romantic beliefs about intimate relationships (Moore & Leung, 2001).

These studies underscored the importance of understanding relationship beliefs or representations in terms of the cultural context in which the relationship is embedded. Furthermore, these cognitive representations and behavioral scripts are especially important to emergent adults between the ages of 18 to 25 years old (Arnett, 2000), or through the 20s (Regan, 2004). Developmental psychologists have identified

them as being in a period in which close peer relationships are crucial to their development (Arnett, 2000; Erikson, 1968). Multiple emotional and development challenges present themselves in relation to searching, forming and maintaining peer and intimate relationships during this period of time (Viner, 2008). Therefore, the present study attempts to explore the emergent adults' conception of relationship beliefs in their romantic relationships, from which to construct a culturally based relationship belief measure.

Recent research on intimate relationships or couple relationships has stemmed mainly from two dominant cognitive-behavioral perspectives: attachment theories and social cognition theories about relationships (e.g., relationship beliefs, attributions, relational schema etc.) (e.g., Collins, Guichard, Ford, & Feeney, 2004). Whisman and Allan (1996) argued for the complementary function between these two frameworks for comprehensive understanding of romantic relationships. Both the attachment and general social cognition theories emphasize the importance of mental models in guiding the way we interpret and behave in relationships, especially close or intimate relationships (Collins et al., 2004). Harvey and Wenzel (2006) reviewed that social cognition research – especially specific beliefs and expectancies in relationships as subjective knowledge structures – benefit from being associated with other cognitive-related models such as cognitive-affective model of attachment. For instance, it was found that relationship-related causal attributions served as the mediator between adult attachment style and relationship adjustment in marital relationships (Gallo & Smith, 2001, as cited in Harvey and Wenzel, 2006).

Pioneer effort in attachment theories (Bowlby, 1969/1982) and research (e.g., Ainsworth, Blehar, Waters, & Wall, 1978) provides us with information on how

relational bonds are formed and how early relationship bonding affect individuals' behaviors in adult intimate relationships (Hazan & Shaver, 1987; Cassidy, 2000 etc.). Securely-attached relationships (Ainsworth et al., 1978) are based on the experience of a stable parent/caregiver-child relationship, whereby providence of support and care from the main caregiver is consistent and reliable. Such early experiences in close relationships allow the individual to form meaningful perceptions and lasting beliefs about the nature and progression of relationships that are later transferred onto romantic relationships in adulthood (Hazan & Shaver, 1987). However, the majority of attachment studies was limited by focusing on the cognitive representations of either the self and/or the significant other, and overlooked the representations of the relationship itself. It is expected that beliefs concerning the consistency and endurance of the intimate relationship itself, in addition to the beliefs about the self and the partner, would provide a more comprehensive understanding of the process of relationship cognitions and their implications. The present study explores the association between attachment cognitions and beliefs about relationships, and how they affect relational behaviors. The study aims to understand whether beliefs about changes in relationships develop from attachment experiences or are independent of attachment-related cognitions.

Reis and Collins (2004) reviewed the adaptive functions relationships entail for couples. They include both physical and psychological adaptive processes (Reis & Collins, 2004). People who were satisfied with their relationships were more optimistic (Srivastava, McGonigal, Richard, Butler, & Gross, 2006) and lived longer (Reis & Collins, 2004). Neurobiological research has found that interpersonal connections promote neural growth in the brain (Siegel, 1999). Stability and durability

of relationships are one of the main indicators of a successful relationship; they are intimately related to personal assumptions about the nature and progression of romantic relationships. For instance, social exchange theorists suggest that availability of alternatives and the expectation for its outcome are more crucial to the stability of relationships than relationship satisfaction (e.g., Thibaut & Kelley, 1959). Past studies have found that both attachment styles and implicit beliefs about relationships influence how individuals deal with conflicts in relationships (e.g., Feeney, 2006; Knee, 1998, Dweck, Chiu, & Hong, 1995). The current study aims to understand how attachment and relationship beliefs about the consistency and stability of relationships affect relationship behaviors, specifically the likelihood of an individual persisting with or exiting relationships during conflicts.

In summary, the current study aims to provide an integrative explanation of behaviors in close relationships by associating relationship beliefs with attachment representations, and how they contribute to persistence in relationship during conflicts. To begin with, it is imperative to understand the individuals' conception of relationship beliefs about intimate relationships.

The Construct of Relationship Beliefs

Social cognition research dealing with intimate relationships has indicated the importance of the knowledge structures relating to relationships in individuals' interpretations of their relationship (Fletcher & Thomas, 1996). These relationship constructs are identified as being formed in early relationship experiences, and are then applied to similar relationships in adulthood (Fletcher & Fitness, 1996). These relationship constructs include schema and scripts of intimate relationships (Shaver, Collins, & Clark, 1996), construal of self and others in close relationships (Bowlby,

1969/1982), implicit theories of the nature and progression of relationships (Knee &

Canevello, 2006), and other related cognitive structures. They form a basic

relationship framework that influences explanations of current relationships, and

guides individuals in responding to events in alignment with these beliefs (Fletcher,

Overall, & Friesen, 2006). In other words, they are the hypotheses and beliefs people

use to make sense of and guide their interactions in their relationship. These cognitive

representations have a profound influence on people's emotions and behaviors in

intimate relationships (Clark & Brissette, 2000).

In recent years, increasing emphasis has been placed on laypeople's beliefs,

assumptions and expectations in relationship dynamics. Heider's (1958) proposal of

the "naive scientist" posits that laypeople function much like scientists, gathering

information and testing pre-held hypotheses in their social interactions. Along with

Kelly's (1955) proposition of personal constructs, research on individuals' subjective

insights and construction of their social reality has begun to receive much attention.

Ordinary people formulate beliefs and assumptions about their social experiences, just

as scientists formulate theories from observations in the laboratories. These beliefs and

attitudes are mental representations that evolved gradually from past experiences; they

might also be imputed from shared knowledge and beliefs originating from one's

cultural and social backgrounds (Levy, Plaks, & Dweck. 1999). The subjective

cognitive representations underlying intimate relationships have been found to

contribute to the initiation, functioning, development and resolution of relationships

(Sprecher, Wenzel, & Harvey, 2008).

The individual's relationship belief structure is likely to be a multi-faceted and

a broad-spectrum construct, encompassing the individual's presuppositions about the

nature, development, maintenance and resolution of the relationship (Knee & Bush, 2008). For instance, believing whether the relationship is "meant to be" (Knee, Patrick, & Lonsbary, 2003), and whether love can overcome all problems in the relationships (Sprecher & Metts, 1989). It has been proposed that relationship beliefs are organized hierarchically, with the beliefs governing almost all general social interactions as the basic level, followed by beliefs about close relationships (e.g., parent-child, siblings, best friends), and lastly, beliefs about a specific relationship, usually intimate relationships (Collins, Guichard, Ford, & Feeney,2004). With this structure, diverse but related constructs and schemas are conceptualized as presuppositions that guide the progression of intimate relationships. Among them are love styles (Hendrick & Hendrick, 1986), communal versus exchange relationships (Clark & Brissette, 2000), dysfunctional relationship beliefs (Eidelson & Epstein, 1982), romantic ideologies (Sprecher & Metts, 1999), destiny and growth beliefs (Knee, et al., 2003) that apply Dweck and Leggett's (1988) conceptions of entity versus incremental theories, as well as the working model of self and partner derived from attachment experiences (e.g., Cassidy, 2000). It is apparent that romantic relationship beliefs involve beliefs and perceptions about the self, the partner, and the nature and quality of the relationship itself (Sprecher & Metts, 1999). Knee and Bush (2008) observed that all these general relationship beliefs would influence one's interpretation of the current social events and relationships.

Review of Past Theories and Measures in Relationship Beliefs

Diverse theories and frameworks have been proposed to explain the varied relationship behaviors. These theories involved the beliefs that individuals hold when entering into a close relationship. They might continue to guide the individual in the

relationship process in its initiation, progression and finally its potential dissolution. Hendrick and Hendrick (1986) supported Lee's (1973, as cited in Hendrick & Hendrick, 1986) attitudinal approaches to romantic relationships, which conceptualized three primary (i.e., Eros, Ludus and Storge) and three secondary (i.e., Pragma, Mania and Agape) love styles, derived from a mixture of the primary styles. These are defined as follow: "Eros (romantic, passionate love)", "Ludus (game-playing love)", "Storge (friendship love)", "Pragma (practical love)", "Mania (possessive, dependent love)", and "Agape (all-giving, selfless love)" respectively (Hendrick & Hendrick, 1986, p. 393). These love styles are concerned with attitudinal assumptions towards romantic relationships, for instance, "pragma" focused on the practical functions the relationship can provide, while people who endorse the "agape" style think that intimate loving relationships should be selfless and giving. Such a conception of the various styles of love seems to have some conceptual overlapping with the "exchange" versus "communal" orientation towards romantic relationships (Hendrick & Hendrick, 1986). Clark and Brissette (2000) reviewed that people in relationships who are oriented towards equal responsibility and reciprocal care (i.e., communal relationships) are more likely to disclose their emotions than people who adopt business transactional-like relationships (i.e., exchange relationships), who will tend to calculate the benefits they can obtain from each other in the relationships. It seems that the "pragma" love style and "exchange" orientation are similar in their focus on personal benefits and loss, while "agape" and a "communal" orientation are similar in focusing more on the welfare of the other party (Batson, 1993). Nevertheless, these theories exemplify the different ideologies regarding what makes a relationship and what entails a good relationship.

Sprecher and Metts (1989) focused on romantic ideologies to capture individuals' beliefs about intimate relationships. Past studies on marital couples found that relationship satisfaction was related to romanticism-related variables (Sprecher & Metts, 1989). Hence, they proposed that some people possess a schematic framework about intimate relationships that operates on the ideology of romanticism. Sprecher and Metts (1999) constructed the Romantic Beliefs Scale (RBS), which identified the following four dimensions of romanticism: "love at first sight", "there is only one true love", "partner and relationship are perfect", and "love finds a way" (dealt with problems successfully) (Sprecher & Metts, 1999, p. 840). Sprecher and Metts's RBS appeared to have some conceptual overlap with Franiuk, Cohen and Pomerantz's (2002) "soulmate" versus "work-it-out" theory, and Knee's (1998) "destiny" versus "growth" belief. Franiuk et al. (2002) and Knee (1998) examined the individuals' beliefs about finding the special someone who is "meant for you", and thinking that having a relationship with this special person would have the least problems. Individuals who do not endorse romanticism, "soulmate", or "destiny" beliefs are more likely to think that problems do exist in relationships and they could be dealt with and overcome.

In Sprecher and Metts' (1999) validation study on romantic beliefs scale, it was found that all four dimensions of romanticism were positively associated with satisfaction and quality of the relationship in dating couples. Although there was a decline in how strongly men and women endorse romantic beliefs over the years, romanticism did not predict a relationship's longevity. Attempts to find an association between breakups and romanticism (assessed by the romantic beliefs scale) were not successful in their study. However, the potential association between stability of

relationships and relationship beliefs has often intrigued researchers in romantic relationships. Franiuk et al. (2002) argued that relationship beliefs not only affect the functioning and quality of relationship but also the durability or longevity of the relationships. Similarly, Knee (1998) observed that for people in the early stage of romantic relationships, those who endorsed "destiny" more strongly than "growth" beliefs were more likely to terminate the relationship when problems are encountered. It is apparent that people who associate intimate relationships with meeting the unique someone meant for them (i.e., "soulmate" theory and "destiny" belief) tend easily to give up on the relationship when faced with obstacles. In contrast, people who believe that successful relationships rely on mutual effort to deal with problems (i.e., "work-it-out" theory and "growth" beliefs) would be more likely to persist. "Soulmate" and "destiny" beliefs denote a perception that relationships are relatively fixed and unchangeable, while "work-it-out" and "growth" beliefs suggest that problems in relationships can be resolved and the relationship can move forward.

From these studies, it appears that the belief whether or not there is a possibility of making changes to the relationship problems is the key to an intimate relationship's longevity (Franiuk et al., 2002; Knee, 1998). Similarly, another study about relationship beliefs conducted by Epstein and Eidelson (1982) highlighted the importance of the possibility and ability of change in the partner. Epstein and Eidelson (1982) constructed the Relationship Belief Inventory (RBI) to assess five specific dysfunctional beliefs about intimate relationships that were deemed important to relational health and satisfaction: "mind-reading is expected", "disagreement is destructive", "sexual perfectionism", "sexes are different", and "partner cannot change". Dysfunctional beliefs in intimate relationships have a negative impact on the

relationships. All the dysfunctional beliefs except for sexual perfectionism were found to be negatively associated with the desire to sustain the relationship and marital satisfaction.

The factor "partner cannot change" in particular, exhibited the strongest relationship with marital satisfaction (Epstein & Eidelson, 1982). "Partner cannot change" assessed the belief whether one's partner has the potential to change, or will remain the same despite efforts to bring about change. Epstein and Eidelson (1982) found that perceiving the partner's behavior as being fixed and unchangeable has detrimental effects on relationships. However, there were mixed findings with the RBI (Knee & Bush, 2008): some studies found that more non-dissatisfied couples presented dysfunctional beliefs than did dissatisfied couples in therapy (e.g., Emmelkamp, Krol, Sanderman & Ruphan, 1987). It is suspected that a specific relational belief's dysfunctionality may be related to the culturally conditioned expectations of the relationship, that is, whether the belief has detrimental effects on the couple's relationship depends on the cultural context in which the relationship is embedded in. and which gives rise to the meanings and expectations of the romantic relationship.

Malleability and Relationship Beliefs

The various studies on relationship beliefs presented one common underlying notion: the question of the malleability of individuals who are involved in the relationship. This reflects the implicit belief framework on the malleability of human attributes proposed by Dweck, et al. (1995). Dweck and associates identified two main implicit beliefs presumed to be fundamental to human experiences, namely "entity theory" and "incremental theory". Entity theorists view traits or personal attributes as

relatively fixed, while incremental theorists consider them to be malleable. For instance, entity theorists perceive intelligence as a disposition-like attribute that is fixed and cannot be changed, while incremental theorists think of intelligence as malleable, able to be cultivated and improved with purposeful effort (Dweck, Hong, & Chiu, 1993).

Past research (e.g., Chiu & Dweck, 1997; Dweck, et al., 1993; Dweck & Ehrlinger, 2006) found that such implicit beliefs held by people are applicable across a variety of attributes and could have important cognitive and behavioral impact on the individuals. For example, people who hold entity beliefs attribute their dissatisfactory performance to their limited intelligence, and were more likely to give up on endeavors when they met with problems or setbacks. In contrast, incremental theorists would perceive the situation as resulting from inadequate effort rather than insufficient ability and they react to the problem by putting in more effort or changing strategy (Dweck, et al., 1995).

Similarly, studies across different domains demonstrated differential effects of implicit belief with regards to the malleability of personal attributes on outcome behaviors, including moral principles (Chiu & Dweck, 1997) and personalities (Dweck, et al., 1995). In relationship studies, earlier reviewed constructs such as "destiny" versus "growth" beliefs (Knee, 1998), "soulmate" versus "work-it-out" theories (Franiuk et al., 2002), and "Partner cannot change" in RBI (Epstein & Eidelson, 1982) can be seen as being informed by beliefs about changeability in intimate relationships.

Dweck et al. (1995), along with other researchers, focus largely on the benefits incremental theories might have over entity theories. However, the benefits of

incremental beliefs were challenged when researchers came to suspect that entity theorists might have the advantage of feeling secure and motivated (in perceiving the predictable and stable quality of the attribute of interest) upon receiving positive feedback (Harackiewicz & Elliot, 1995). Once the individual's performance had been evaluated as positive, entity beliefs might even buffer the individual from being discouraged by subsequent occasional negative outcomes (Harackiewicz & Elliot, 1995). Failures were more likely to be dismissed as incidental rather than attributed to the individual's enduring qualities. Hence, entity beliefs appear to be beneficial in certain context.

Darley (1995) also commented that people can be optimistic and entity theorists at the same time. Such individuals focus more on their successes on intelligence tasks, and thus feel less helpless when they fail to perform as before. Nevertheless, Dweck et al.'s (1995) studies highlighted the importance of understanding people's perceptions and expectations of change. Despite substantial research on change-related beliefs, to date no specific measurement has been constructed to directly assess the cognitive representation of perceived changeability in close relationships.

Change in relationships: Multifaceted belief?

It is fundamental for people to hold theories and beliefs about themselves and others to regulate their social interactions (Fletcher, et al., 2006). Recent studies in intimate relationships have explored the change-related beliefs people bring to their relationships. However, most discussions regarding "change" in human attributes and relationships are mainly concerned with malleability -- the potential to be cultivated -- rather than the concept of change per se. Rogge and Bradbury (2002) proposed to

adopt a multidimensional approach towards the understanding of change in intimate relationships to include both induced change (i.e., malleability related) and natural change (i.e., changes to the relationship overtime).

The original intention for using such terminology was to refer "induced change versus natural change" to "experimental change versus natural change" observed in non-experimental studies (Rogge & Bradbury, 2002). The researchers suspected that "natural change" might entail a more lasting and ubiquitous effect on relationships, especially marital relationships. At the very least, the underlying mechanisms involved in induced change and those involved in natural change might be different, thus preventing an accurate and comprehensive understanding of relationship change.

Building on this perspective, the current study aims to expand previous theoretical perspective of contrasting induced change versus natural change. Hence, for the present study, the construct malleability is differentiated from natural change in relationships. It is conceptualized that malleability could involve induced change as a result of purposive action by the self or the partner in the relationship, whilst natural change is change that occurs without any intervention or purposeful effort, but is rather the result of the natural course of the relationship or an unfolding of a relationship's inherent process.

Although past researchers did not define change in relationships to explicitly exclude changes that are naturally occurring, the research focus has primarily been on induced change. For instance, incremental theorists attribute the negative outcome of achievement tasks to inadequate effort applied rather than a lack in ability (Dweck et al., 1995). In the relationship context, people who subscribe to the growth theory are less concerned about problems in their relationships, as they believe they are able to

do something about the problem, thereby leading to the growth of the relationship (Knee, 1998). Similarly, dysfunctional beliefs measured by RBI's "partner cannot change" were more interested in the ability of the partner to introduce change, such as "if my partner wants to change, I believe he/she can do it", and "a partner can learn to become more responsive to his/her partner's needs" (Epstein & Eidelson, 1982). It is apparent that these studies focused on the ability to change as the attribute-in-concern on the part of the partners, instead of the characteristics of the relationship itself.

Natural changes of the relationship were either overlooked or not given equal attention. An adage such as "time changes everything" often carries a negative connotation, especially for relationships. This is probably related to the instability and uncertainty involved when changes occur. In the relationship context, partners are often concerned about its potential decline as a result of the simple lapse of time whenever change is perceived (Hinde, 1997; Rogge & Bradbury, 2002). Moreover, beliefs about natural change are relationship representations at the dyadic level, rather than at the individual level. For instance, one may believe that, given sufficient time an intimate relationship will change, and such change is beyond the ability of those involved to salvage it. This clearly indicates the belief concerning the dyad as a whole, rather than the behavior of any specific partner. Apparently, natural change has often been a concern in intimate relationship. It is probable that both induced and natural change are important to the relationship cognitions represented at dyadic level. Hence the first objective of the present study was to conceptualize the construct of relationship changes, and to develop a measurement to comprehensively assess changes in intimate relationships.

In sum, relationship change is a multifaceted and complex phenomenon. Beliefs about changes in relationships should be understood by taking into consideration the experiences and lay beliefs of relationship changes. The conceptualization of change beliefs in relationships would therefore be likely to involve both natural changes (process of development as time goes by) and purposely induced changes (active intervention with aim to bring about change). There might be multiple pathways involved to represent beliefs about relationship changes and beliefs about relationships per se. A relationship involves multiple inseparable components that should be taken into consideration when understanding relationship beliefs: two individuals, partners' respective beliefs about the self and the partner, and beliefs about the relationship. One other main approach to the study of intimate relationships is the attachment theory (e.g., Shaver & Mikulincer, 2011). Attachment research generated a large amount of information about representations of self, the other, and the relationship. In order to better understand relationships beliefs and relationship behaviors, it is necessary to review attachment theory and studies related to.

Attachment and Relationship Beliefs

Research on intimate relationships was not performed on relationship beliefs in isolation; it incorporates information across different domains in social cognition (e.g., Harvey & Wenzel, 2006; Fletcher & Fitness, 1996). Both attachment theorists and social cognition researchers highlighted the mental framework or knowledge structures regarding relationships constructed from early experiences that were responsible for relationship behaviors and adjustment (Whisman & Allan, 1996). However, it was noted that the working model of attachment is a relatively more motivation-based, goal-directed and emotion-laden construct than the information-processing-based or schematic constructs assumed by social-cognition theorists

(Collins et al., 2004). In this way, the internal relationship framework seems to function more like a trait-like construct that overarches various social-cognition constructs (Harvey & Wenzel, 2006). In a similar way, Collins and Read (1994) proposed that beliefs and attitudes are sub-components of the working models. Nevertheless, both attachment working models and relational beliefs involve personal constructs of social situations and events, and are ubiquitous in affecting individuals' intimate relationships. The current study aims to explore associations between relationship beliefs about change and attachment-related cognitive representations, with respect to how they might work together to influence relational cognitions and behaviors.

Psychiatrist John Bowlby first proposed the instinctual attachment behavioral system after years of observing children who had different relational experiences with their mothers, whom behaved differently when they grew up (Mikulincer & Shaver, 2007). According to Bowlby, human infants have an innate tendency to maintain proximity to the attachment figure for support and comfort when faced with threatening situations (Bowlby, 1969/1982), either real or imagined (Mikulincer & Shaver, 2007). Underlying this proximity-seeking behavior is the goal of establishing a sense of security from the attachment relationships. In other words, the infant wants to feel protected and supported by being near to the attachment figure, usually the mother or the main caregiver.

If the attachment figure does not readily respond to the needs of the infant or is not accessible, the infant experiences great distress and anxiety (Fraley, 2010). The availability and responsiveness of the main caregiver form the basis for acquiring a sense of security that renders the world predictable, supportive and safe. This sense of

security would then enable the individual to venture out and explore his or her surroundings. Hence, securely-attached relationships provide the individuals with a "safe haven", and a "secure base" from which they are able to explore and develop. This inherent tendency to depend on someone is healthy and beneficial to the individual, and is expected to last throughout one's lifespan (Feeney, 2006).

Internal Working Model and Continuity of Attachment

Bowlby (1988) claimed that through repeated interactions with the main caregiver during infancy, the child forms an organized internal conceptual framework that includes mental representations of the self, the other, and the relationship. Individual differences in mental representations were reflected via different attachment behaviors exhibited by individuals later in life. Bowlby termed these attachment representations the internal working models of attachment. These internal working models are cognitive-affective representations that are similar to schemas, scripts or beliefs and attitudes concerning attachment relationships (Mikulincer & Shaver, 2007). They are responsible for organizing memories about the interactions between the self and the attachment figure. These cognitive constructs evolve into an interpretative framework that biases future cognition and influences emotions and interpersonal behaviors (Mikulincer & Shaver, 2007).

Working models of the self and others typically develop through early experiences of interaction with the attachment figure. The self-and-other interaction gives rise to the beliefs regarding whether the self is worthy of love, and this is dependent on whether the attachment figure is consistent and responsive in providing care and support. Repeated interactions allow the individuals to formulate chronic or prototype representations that can be transferred onto new relationships (Collins,

1996). In other words, the continuity of the attachment system is made possible by the internal working models.

As Collins (1996) mentioned, although developed from actual interactions, the models become abstract knowledge, beliefs and expectations of relationships. As organized cognitive aspects of attachment experiences, the internal working models are likely to reside in the long-term memory. As the term suggests, Bowlby (1973/1976) conceptualized the internal 'working' model as a relatively stable but not static or rigidly fixed cognitive structure. Modification of these models are possible as a result of significant or traumatic experiences, which thereby bring about changes in care-giving circumstances, for instance, divorce, death and severe illness of the partner (Lewis, Feiring, & Rosenthal, 2000).

Bowlby (1973/1976) also mentioned that the endurance of the working model is based on relatively stable familial conditions. Indeed, Lewis et al. (2000) found that children who experienced parental divorce exhibited no association between their "strange situation" behaviors during infancy and their cognitive representations of attachment during adolescence. Among these children, those who were securely attached at one year old did not have any advantage over those who were insecurely attached. They ended up having insecure attachment at about the age of 18. However, there was some evidence for continuity of attachment representations when childhood recollections about the attachment relationships at the age of 13 were found to be related to mental models of attachment assessed at 18 (Lewis et al., 2000).

Thompson (2000) also reviewed a number of longitudinal studies and obtained inconsistent findings regarding the continuity of attachment classifications, with some studies showing attachment categories remaining stable across years and other not.

Similarly, they hypothesized changing family conditions and care quality to be responsible for the instability of attachment patterns (Thompson, 2000). Hence, attachment representations are likely to be enduring given that the families did not experience drastic disruptions or negative events. Indeed, longitudinal studies on middle class families and families with alternative lifestyles found that individual differences on attachment representations were significantly stable over time (Waters, Weinfield, & Hamilton, 2000). In contrast, Waters et al. (2000) found that those who were subjected to stressful life events did not demonstrate stability in attachment representations from infancy to young adulthood.

A majority of these studies on the continuity of attachment representations obtained information through retrospective recollections of individuals' attachment experiences. Thompson, Laible and Ontai (2003) suggested that measuring attachment in early childhood years rather than the infancy period would be more predictive of later attachment. He proposed that young children before the age of three have not formed sound and coherent understanding of the self and relationships. Working models are likely to change after age three. At a time when children are at their height of rapid personality and cognitive development, they come to possess the ability to ponder on and create representations that are reflective of early experiences with their caregiver (Thompson et al., 2003). It is also possible that after the age of three, the internal working model has matured enough and settled down with comprehensive and relatively stable prototypes of early attachment relationships (Thompson, 2000). Hence, it is suggested that preschool age or later would be a more appropriate time for assessing attachment representations than during infancy.

Coincidently, memory research also found that people were better able to recall events that happened at age three or older, and accuracy of recall increased along with the age at which the event took place (Bauer, 2007, p. 53). Researchers also found that the average age for earliest identifiable autobiographical memories was three to three-and-half years old (Bauer, 2007, p. 52). Hence, in order to explore the continuity of attachment from young age to adulthood, the present study will collect retrospective memories of the earliest identified incidences of separation from the main caregiver. Although it has been argued that the individuals' memories of their early years are not without distortion, they still represent important interpretations or meaningful templates constructed by the individuals' past (Robinson, 1996), and are likely to contribute to adult attachment representations.

Adult Attachment in Romantic Relationships

Attachment researchers have generated much evidence on the continuity of attachment representations, especially in the realm of romantic relationships. Romantic or intimate couple relationships have been cited to be the adult relationship type that bears most resemblance to the infant-caregiver attachment relationship (e.g., Fraley & Shaver, 2000). For instance, both romantic relationships and attachment revolve around a specific target for bonding, and the individual becomes anxious when the bonding target is not readily accessible. Hazan and Shaver (1987) were among the pioneers in applying Ainsworth et al.'s (1978) three categories attachment styles (i.e., secure, anxiety and avoidant) to adult romantic relationships. They found that the proportions of infants that fell into the three attachment styles in Ainsworth's "strange situation" experiments were similar to those of the adults self-reported attachment patterns in their romantic relationships (Hazan & Shaver, 1987). The forced-choice

measure was relatively effortless to administer to participants, and owing to its face validity and straightforward expression, it was well-received among psychologists (Mikulincer & Shaver, 2007).

Early adult attachment studies followed the steps of Hazan and Shaver (1987) and utilized the categorical attachment patterns of behavior to understand adult romantic relationships (e.g., Bartholomew & Horowitz, 1991; Collins, 1996). These studies consistently found individual differences among adults who exhibited different attachment styles in their relationships. For instance, Simpson (1990) found that securely-attached adults were more interdependent with their partners, more likely to commit to their relationships, had higher level of trust, derived more satisfaction from the relationship, and enjoyed more positive emotions than those who were anxious or avoidant in their attachment styles. However, the categorical approach of studying attachment was not without limitations. Indeed, it was being criticized for undermining individual differences within a particular category (e.g., Collins & Read, 1990; Mikulincer, Florian & Tolmacz, 1990), as well as low test-retest reliability (Baldwin & Fehr, 1995). These researchers contended against the assumption that systematic differences among the individuals within each category of attachment patterns are unimportant.

Hence, recent research into adult attachment has found the dimensional-approach to understanding attachment to be more informative and appropriate (e.g., Brennan & Shaver, 1995; Fraley & Shaver, 2000; Mikulincer & Shaver, 2007; Mikulincer, Shaver, Bar-On, & Ein-Dor, 2010). Specifically, Brennan, Clark and Shaver (1998) found evidence for the consistent existence of two dimensions, namely "anxiety" and "avoidance" across 320 attachment measures, and these dimensions

significantly predicted numerous relationship outcomes, such as satisfaction with relationships (Brennan & Shaver, 1995). In other words, the different typologies of attachment patterns across various studies could be mapped into the two dimensional space, and provide better predictability in relationship behaviors. (Mikulincer & Shaver, 2007). Nevertheless, whether categorical or dimensional, underlying all these cognitive-behavioral tendencies are the internal working models of attachment, constructed and translated from infant-caregiver relationships to adult romantic relationships. However, recent researchers argued that the dimensional approach provide more direct or detailed information on the underlying cognition that drives attachment behavior (Mikulincer & Shaver, 2007).

The "anxiety" dimension involves appraising the threatening situation and becoming uncertain about the availability and consistency of the partner. The "avoidance" dimension is reflected by regulatory efforts to prevent the self from depending on the partner. Griffin and Bartholomew (1994; Bartholomew, 1990) suggested computing and inferring the model of self from the anxiety dimension and the model of others from the avoidance dimension. It was suggested that different combinations along these two dimensions could be understood as the different attachment styles of individuals. In this way, the dimensional approach would be more flexible than the categorical approach for data analyzing.

For instance, if someone is high on anxiety but low on avoidance, they are likely to possess a preoccupied attachment style. Indeed, adults who are involved in intimate relationships often contemplate about their own worthiness for being loved (i.e., the self model), and whether the partner is reliable and consistent (i.e., the other model). The increasing trend of utilizing a dimensional approach towards studying

adult attachment is partly due to the versatility of the dimensional approach, whereby researchers are able to convert their continuous data into categorical-like attachment patterns should their research question warrant such conversion. More importantly, Fraley & Waller (1998) advocated the use of dimensional approach to capture adult attachment as their studies found that people in reality do not fall exclusively into categories of attachment patterns, but all typologies of attachment could be conceptualized into a two-dimensional space of anxiety versus avoidance. They contended that utilizing categorical approach might risk losing precision in detecting individuals' attachment orientation. Hence, the present study also utilized the dimensional approach towards understanding adult attachment.

Nevertheless, both categorical and dimensional attachment measures were developed to measure adult romantic relationships as attachment relationships that frequently strive to obtain a subjective sense of security. As such, perceived uncertainty might be an inherent property of insecure relationships.

Attachment, Uncertainty, and Relationship Beliefs about Change

The nature and functions of the internal working models of attachment are not greatly different from other personal constructs in social-cognitive research (Mikulincer & Shaver, 2007): they are hypothetical constructs focusing on self-and-other cognitions, and they can differ in their accessibility and availability. These relationship constructs might be organized hierarchically from general to specific relationships (Collins et al., 2004). Collins and Read (1990) noted that the transforming of early interactions with social others into mental representations is not an exclusive conceptual framework of the working models of attachment. Baldwin (1992) proposed that the relational schema is the core construct in cognitive

representations of relationships across different domains of social cognition. Whisman and Allan (1996) suggested that both attachment and social cognition such as relationship beliefs are forms of a "cognitive conceptual framework for understanding romantic relationships" (p. 265), and are hence intimately associated conceptually. Indeed, adult attachment styles, as cognitive-affective knowledge representations, would also benefit from an integrative approach that focuses not only on the self and the other, but also on the representation of the relationship itself.

Secure versus Change and Uncertainty

Underlying the working model of attachment is the conception of a secure relationship. In the secure relationship, the care and support rendered by the partner is perceived to be consistent and responsive. Such relationships are stable and resilient to challenges. On the other hand, insecure relationships have their roots in perceived uncertainty about the care and support received. As described in the working model of attachment, being uncertain about the partner's care giving would eventually lead one to question one's worthiness and lovability.

Uncertainty is often accompanied by the anxiety and the need to be reassured. It is hence likely that beliefs and perceptions about potential changes in the relationship might be a subset of or prelude to attachment anxiety. Uncertainty reduction theory (Berger & Calabrese, 1975; Berger & Bradac, 1982) suggests that relationship uncertainty could involve three aspects: uncertainty about self, uncertainty about the partner, and uncertainty about the relationship itself. One basic premise of the uncertainty reduction theory is that change is inherent in all relationships, which generates uncertainty (Dainton & Zelley, 2011). Although Berger and Calabrese (1975) first proposed the theory to explain interpersonal uncertainty during initial or

early communication encounters, Solomon and Knobloch (2001) applied the uncertainty reduction framework to romantic relationships and observed uncertainty to persist in these relationships.

Some researchers (Solomon & Knobloch, 2001) emphasized that, in regard to uncertainty, thinking about relationships is different from thinking about the self and the partner. Thinking about the relationship involves perceiving the couple as one unit. However, a majority of uncertainty assessment tools focus mainly on the uncertainty about the individual partner's emotions, cognitions and behaviors, rather than the relationship per se. Similarly, relationship representations in past research, including attachment models, have also focused on the individual or the partner, rather than on the relationship itself.

Intimate relationship is a dyadic activity that involves two intimately interacting persons. Perceptions about the relationships are not only about the self or the partner, but also involve expectations at the dyadic level in regard to the nature, process and development of the relationship itself. In other words, relationship beliefs and perceptions would be among the most abstract forms of knowledge of interpersonal relationships (Solomon & Knobloch, 2001). Relationship-level representations are critical to the understanding of the process and content of intimate relationships, yet they are often overlooked in the study of intimate relationships and attachment.

Relationship representation is an umbrella term for the knowledge structures about the relationship treated as a unit of analysis, which can include the entire progression of the relationship from beginning to end – how it forms, develops, maintains and dissolves. As a pilot attempt to understand relationship representations,

the current study focuses on one of the most fundamental aspects of relationship experience, the likelihood of change in intimate relationships.

Human existence is essentially a process, which is defined by the potentiality of the human experience (Whitehead, 1968). In other words, the present is a part of the past and of the future, and hence meaningful (Whitehead, 1968). Developmentally, we continue to develop and grow, following a blueprint set down in our youth; we form new relationships based on the internal working model formulated from our childhood experiences with significant others. Secure attachment is achieved by a stable and healthy relationship whereby care and support provided by the caregiver is consistently responsive, and relatively unchanging. Therefore, beliefs about the relationships' consistency and durability are essentially perceptions resulting from the internal working model (IWM) formulated from past experiences. This consistency and durability of relationship is operationalized in the present study as whether there is "change" in the relationship. It is proposed that incorporating beliefs about "change in relationship" would bridge the self and other individually oriented representations with the dyadic level representations in attachment models, resulting in a more coherent and comprehensive understanding of the intimate relationship.

Although past studies have examined the effects of the malleability of the partner (e.g., "partner cannot change" of Relationship Beliefs Inventory, Epstein & Eidelson, 1982), or general beliefs about the potential of individuals to grow and develop (e.g., Dweck, Chiu, & Hong, 1995), and belief about the stability of problems in relationship ("growth beliefs" in Knee, 1998), it remains largely unknown whether perceiving and expecting changes in the relationship itself is beneficial or detrimental to the relationship itself. Dainton (2003) found that perceiving romantic

relationships as being uncertain and likely to change could be both an advantage and a disadvantage to the relationship. The critical issue is how the individual deals with the uncertainty and the anxiety arising from it, which might finally be related to the cultural context and the shared beliefs about relationships in the community.

Cultural Models of Change and Relationship Beliefs

Like most social cognitive constructs, relationship beliefs are socially constructed. Attachment representations and beliefs about changes in relationships can only be properly understood in the cultural context where the meaningful system of shared relationship beliefs informs the formation, the interpretation and the potential dissolution of relationships. Relationship-related representations, as is the case with most knowledge structures, can be derived not only from first-person direct experiences in romantic relationships, but also from indirect sources such as shared relationship beliefs of family and friends, cultural norms and the media (Hatfield & Rapson, 2010). Cultures provide different cultural models of intimate relationships. The same beliefs may produce different result in different cultural context.

Indeed, relationships are embedded within the culture and hence are intimately affected or directed by the culture (Hatfield & Rapson, 2010). Specifically, Goodwin and Tang (1996) noted that culture governs and shapes the love styles people adopt in romantic relationships. The Chinese relationship model (Chan, Ng, & Hui, 2010), being collectivistic, emphasizes fulfilling the responsibilities and obligations of one's role in the relationship. Furthermore, in Chinese communities, highly interdependent, close-knitted relationships are celebrated (Tang & Zuo, 2000, as cited in Chan, Ng, & Hui, 2010). In this context, love and romance are deemed to be inferior in importance to that of the familial responsibilities and obligations (Moore & Leung, 2001). Indeed,

such emphasis on familial relationships is evident across not only the Chinese, but also across the varied and diverse collectivistic societies, such as Japan and Korea (Kagitcibasi, 2007). It is likely that the people who adhere more to the collectivistic orientation, such as Chinese, Japanese, and even South American, construct relationship models differently from people who are from the more individualistic societies. However, a large proportion of the relationship belief studies were conducted in the individualistic context or conceptualized from the modern Western ideologies about relationships. It is therefore unclear whether in the collectivistic context, relationship beliefs differ from those found in the Western cultural context. Relationship behaviors have been found to differ across the individualist/collectivist divide: for instance, Chinese were found to utilize more obliging style rather than confrontational style compared to their Western counterparts in managing conflicts in romantic relationships (Liu, 2012).

These findings about Chinese or Asian styles of cognition probably stem from the Chinese philosophy of the "way of life," for instance, "Zhong Yong" (i.e., take the middle way or moderation), by being modest to avoid an inclination towards the extremes (Ji, Lee, & Guo, 2010). Relationship harmony is considered the primary concern for relationship behaviors. The wellbeing of the collective and the wellbeing of the relationship itself is considered more important than the wellbeing of the individual partners in the traditional Chinese world view. This is especially apparent when dealing with conflicts in relationships, in which case the principle of "Zhong Yong" would advise the individual to be moderate on others' opinions and needs, and readily accommodate to them in resolving conflict (Li et al., 2010). This typically results in an effort to change oneself rather than attempting to change the people in

their social environment, which is for the most part achieved by regulating extreme emotions and avoiding expression of these for the good of the self and society. On the other hand, studies have shown that the Chinese are more likely to show attachment, styles that would be considered anxious which motivates them to be more alert and attentive to the relationship (Chan et al., 2010). Being anxiously attached might be an adaptive fit to the highly interdependent relationship networks in the collective cultures, such as Japan and Korea, whereby relationships are closely-nit (Triandis, 1989). It seems that what is considered to be relatively detrimental in Western and relatively individualist context cultural communities where most contemporary psychological research has been conducted, might produce adaptive outcomes in an Eastern and relatively more collectivistic context. In particular, Neo (2002) conducted a pilot study on Singaporean Chinese in a local university and found that perceiving romantic relationships and friendships to be changeable was associated with lower levels of subjective well-being and higher level of loneliness. It seems that perceiving changes in romantic relationships would be detrimental to Chinese's wellbeing.

In view of the different conceptual frameworks reviewed, the present study aims to explore the indigenous beliefs about relationships and relationship change, and on the basis of the results of this exploration to construct a measure of relationship beliefs about change. Views related to beliefs about change and relationship changes are collected from young people in the local Chinese community, and how these beliefs might influence their relationship behaviors.

Relationship Representations and Relationship Persistence in the face of

Conflicts

The belief and expectation of whether the relationship might change is expected to influence individuals' behavior in dealing with relationship conflicts. Conflicts are inevitable in intimate relationships and the management of them or the resulting cognition and behaviors are often indicative of a relationship's stability (Canary, Cupach, & Messman, 1995). The majority of past research focused on variables related to relationship quality as indicators of relationship health and stability, which are used to predict the likelihood of the relationship ending. These include commitment, satisfaction, trust, dependency, availability of alternatives perceived, and amount of self-disclosure in the relationship (e.g., Felmlee, Sprecher, & Bassin, 1990; Canary et al., 1995; Le, Dove, Agnew, Korn, & Mutso, 2010).

Conflicts can occur over a large variety of problems, from general to specific behaviors (e.g., not washing the plate immediately after meal), from performance to the personality of the partner (e.g., he is too laidback, or she is too talkative), from trivial to serious issues (e.g., snoring too loudly versus cheating). Although conflicts are essential to building satisfying and enduring relationships in which partners negotiate their differences, they can erode the relationship with increasing frequency if inadequately resolved. Couples often attribute conflicting interactions to the nature and development of the relationships (Canary et al., 1995).

As mentioned, past research has offered explanations on conflict behaviors in intimate relationships by associating them with the content and quality of relationships (e.g., commitment, satisfaction, etc). Much less attention is given to the cognitive process involved during conflicts. However, the first step towards the dissolution of

the relationship often starts from ideation of exiting the relationship (Hinde, 1997), and this ideation might stem from the cognitive belief about the nature of relationships. Although ideas do not always lead to action, the actual behavior of breaking up undeniably originates from harboring doubt about the relationship's stability and persistence. The present study utilized the ideation of ending the relationship as the outcome measure of the effect of relationship change beliefs.

Examining the cognitive process individuals adopt during conflicts would help to promote understanding of the link between unpleasant events (e.g., conflicts) and negative outcomes. People often demonstrate cognitive appraisal of the relationship development during conflicts, for example, whether the relationship will last, how to carry on with the relationship despite having such conflicts, whether the relationship is worthy enough to keep on trying and so on. A wavering of commitment is often observed during conflicts. Sprecher and Metts (1999) found reduced strength of endorsement of general romantic beliefs during, as well as before, the breakup. Although relational uncertainty is a continuous factor in almost all intimate relationships (Baxter & Montgomery, 1996), it is especially salient in the midst of conflicts.

Similarly, attachment research emphasized the activating of attachment-related representations and behaviors during conflicts when threat to the attachment bond is imminent, as conflicts often lead the individual to doubt the availability and reliability of the partner (Kobak & Duemmler, 1994, as cited in Feeney, 2004). Feeney (2004) reviewed past studies that found that various attachment representations and styles were associated with different strategies in dealing with the conflict. For instance, secure individuals were more likely to adopt constructive ways to resolve the conflict

than insecure individuals (e.g., Creasey, 2002). Relationship beliefs research also demonstrated the association between beliefs and management of conflicts. For example, Knee (2004) found that the belief that relationships can be improved (i.e., growth beliefs) was associated with positive responses towards conflicting views about relationships between the partners.

In sum, it seems that people are likely to vacillate with regard to the endurance and consistency of a relationship during conflict situations, and relationship representations, including attachment and related beliefs, could provide information on their persistence in relationship during conflicts. However, it is unclear whether the belief about a potentially changing relationship would provide a buffering effect during conflict or accelerate the deterioration of the relationship.

Purpose of the Study

The present thesis has three main objectives. As reviewed earlier, beliefs regarding relationship changes might have important implications for relationship behaviors, and the question whether beliefs are beneficial or detrimental often depends on the cultural context which nurtures the relationship. Additionally, most of the studies in relationship beliefs were conceptualized and assessed in the individualistic context. Hence, the first objective is to explore and understand the lay construct of relationship change in Singapore Chinese. This will be performed by qualitative interviews with young adults to understand the nature, content and influences of their beliefs about relationship change. The responses collected will be incorporated into a questionnaire constructed to assess relationship beliefs about change. Secondly, the study aims to examine the psychometric properties of the newly constructed scale. The new questionnaire will be subjected to validation analyses, which involve examining

the factor structure of the scale, as well as demonstrating convergent, discriminant, and predictive validity of the scale.

Lastly, the study aims to provide an integrated explanation of the association between attachment and relationship beliefs, and examine their influences on persistence in relationship during conflicts. The enduring nature of internal working models (i.e., cognitive representations of the self and the other) enables the continuity of attachment patterns from childhood to romantic relationships. However, the model of relationships or cognitive representations of relationship per se have hitherto been overlooked in attachment research. Hence, the present study will attempt to integrate relationship beliefs about change with attachment in explaining relationship outcomes.

CHAPTER 2: STUDY 1

Qualitative Study on Relationship Beliefs about Change

People hold beliefs about changes in intimate relationships that have
implications for the maintenance, development and dissolution of the relationships
(Flora & Segrin, 2000; Sprecher & Metts, 1999). As socially constructed, relationship
beliefs might produce different results in different contexts. Hence, it is imperative to
understand the construct of relationship change as perceived by emergent adults. Study
1 conducted qualitative interviews with Singaporean Chinese in an attempt to capture
the construction of the belief about change in intimate relationships that is indigenous
to the local culture. As this is a qualitative study intended to explore the construct of
relationship beliefs about change, no set hypothesis is proposed prior to the interviews.
However, we do expect both induced change and natural change to be reported in the
interviews. Responses collected from the interviews would be utilized to construct an
indigenous relationship beliefs scale in regard to the nature and potentiality of change
in relationships.

Method

Participants

Fifty-one undergraduate Singapore university students, 26 males and 25
females, were recruited to take part in a one-to-one, semi-structured interview. These
students were enrolled in an introductory psychology course and obtained partial
course credit for their participation. All of them were Singaporean or permanent
residents of Singapore, of ages ranging from 18 to 28 years old with mean age of
22.57 ($SD = 1.19$) for male participants and 20.17 ($SD = 1.37$) for female participants.

Only students of Chinese ethnicity were recruited. All participants were involved in romantic relationships at the time of the interview.

Design and Procedures

Each interview took about 30 to 45 minutes, with the first five minutes dedicated to building rapport between interviewees and the interviewer. The semi-structured interviews consisted of a list of questions developed to test the research question concerning romantic relationships. Participants were asked about their expectations and beliefs regarding intimate relationships, including their personal beliefs about the nature and causes of potential changes in the relationships. They were also interviewed about what they would do when the relationship changes.

The main question asked about relationship change is: "Will relationships change and what are the factors that contribute to changes in a relationship?" This question might be followed by the following probing questions: "Is change in a relationship something good?", "Do people have control over their relationships or changes in relationships?", "Would you want to make changes to your relationship if you have a choice, and why would or would you not do so?"

In this way, the young people's beliefs, perception of the meaning of changes in relationships, were explored. The interviews were digitally recorded with the participant's consent. Responses from the interviews were then transcribed and theme-coded by two research assistants. Emergent themes were identified from the interview scripts by searching for recurrent concepts that were pertinent to relationship beliefs about change. The recurrent themes were initially identified and decided by the thesis's advisor and myself. The two assistants recruited were briefed about the

meaning of the themes, and trained by the thesis supervisor to perform the coding of the interview responses on the recurrent themes' independently. They were asked to go through the interview transcripts line by line, searching for participants' responses concerning relationship beliefs that could be coded into the recurrent themes identified earlier. Examples were cited to show them sample responses that might be coded into the relevant themes. They were also encouraged to identify new themes if they found arising from the data as they read. For instance, one of the participants commented "If I started to mature, my thinking changes, so this may affect the relationship, but that is you making a change, right?" The participant referred changes to something related to growth, and that it is the individual who is responsible for the change. Hence this was coded on the theme "Relationships change when I change", as well as "Relationships change as growth". Any discrepancies between the coding were discussed when the assistants meet up upon completion. The inter-rater reliability was found to be 98%, computed from percentage agreement (i.e., number of agreement scores divided by total number of scores). Recurrent themes emerged from the data were considered important to the young people's conception of changes in close relationships. The frequent recurrent themes were adopted and adapted into a structured questionnaire to tap people's beliefs about the endurance of and changes in intimate relationships.

Results and Discussions

The qualitative study identifies the relational beliefs in close relationships, specifically the nature and causes for changes in these relationships. Sixteen themes have been found to be frequently reported by different participants across the interviews; these themes are deemed important to the participants' perception of

changes in relationships. Table 1 shows results of the theme-coding of the content in the recorded transcripts, and their ranking in terms of frequency cited by participants.

It appears that the recurrent themes could be organized around three main perspectives about changes in relationships. As expected, changes as perceived by Singaporean Chinese included both induced and naturally occurring changes without the purposive interventions from the couple. As presented in Table 1, some of the most frequently mentioned beliefs about the nature of relationship changes are related to the agent that instigates the changes, such as oneself, the environment and circumstances. For instance, item 1 and item 2 states that relationships change when the self or the environment change respectively. This is followed by a realistic second theme, that changes are inevitable in life and uncontrollable as people are unpredictable. For instance, item 8 refers to changes in relationships as the only constant in life. Lastly, an emergent third theme suggested that change itself is required as a form of maintenance to tackle the inevitable change or sometimes downturn in relationships (e.g., items ranking 10 and 11). It also indicates that both parties need to make positive changes for the sake of preserving the relationship (e.g., item 4).

Table 1

Coding Frequency of Recurrent Themes in Interview Transcripts

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Rank	Themes	Average Frequency

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Rank	Themes	Average Frequency
1	Rps change when I change.	98.5
2	Rps change due to environment or situation changes.	34
3	Rps change as growth (part of growing process).	22
4	Rps change when we change together as a couple in the relationship.	20.5
5	Rps change due to being at different phases in my life.	20
6	Rps change when I cannot stop my partner from changing.	18
7	Rps change because people are unpredictable.	13.5
8	Rps change as change is the only constant in life.	13
9	Rps change due to being at different stages of relationship.	13
10	Rps change as a mean to compromise and work things out (e.g., changing my perceptions).	12
11	Rps change is to "preserve" the relationship from going downhill.	8
12	Without progress, there will be deterioration.	7
13	The longer the rp, the more likely to change.	4.5
14	Rps change because people like to experience the highs and lows in rp, as the spice of life.	4
15	Rps change when my perception of my partner changes, after being in the rp for some time.	4
16	Change as a deviation from expectation.	4

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Note. Rps = Relationships. The Average Frequency referred to the average frequency count of quotes across the two raters that were coded as the listed theme.

The following are some examples of the interviewees' responses recorded and arranged in accordance with the three prevailing themes.

Who and what is responsible for change. When participants were asked about whether they think intimate relationships would change, some of the typical responses from the respondents were the following:

A male interviewee said:

> Yes. As age goes by your thinking changes, then your concept of relationship changes.… If I started to mature, my thinking changes, so this may affect the relationship, but that is you making a change right?

Another female interviewee mentioned:

> Yes, definitely, because humans will never be stagnant, that's how we survive through all these times, adapt and change to our environment… change will come, definitely… Mostly the case we do have some control over these changes, we can resist change, but I believe ultimately you'll still have to adapt to [the] environment. But the degree on how you adapt depends on yourself.

These responses highlights the dynamic nature of relationships, including the people in the relationship, the environment and the natural progression of the relationship. These participants believe that the relationship will change as the partners change.

Change is inherent in relationships. Participants frequently mentioned that change is inevitable. It is almost impossible to avoid or stop changes from occurring. This could be related to the unpredictability of human nature: human beings seek novelty and excitement in relationships rather than stability and stagnation.

Participants expressed the realistic views that one should not expect things to remain the same across time.

A male interviewee said:

> I think it is still the same, but you can't really know what to expect from it [the relationship], so definitely I think it will still be changeable, because people are unpredictable, so don't really know what is going to happen…

A female interviewee said:

> …if I fall for a person, surely I hope it will last… but forever?   It depends. Any situation comes in and it may interrupt, maybe just split off … so I am not sure. So I cannot have a concern that it may last forever. It may… but it cannot, it will not… something like that.

Another female interviewee also responded similarly:

> …because there are so many things in life that will change, and these I think are out of your control. Let's say, one person decides to go overseas to work, another person decides to take a new hobby… you can't really say you are not working hard [on the relationship], but it's out of your control also.

Managing changes. Some of the participants, who professed beliefs about the inevitability of change in relationships, suggested that deliberate efforts to make changes in relationships were needed to keep the relationship from continuing to deteriorate. This theme seems to correspond to the Chinese philosophical idea about learning, as mentioned by one of the interviewees, which proposes that one needs to

continue putting in effort to maintain its status quo. Similarly, if no one introduces positive changes into the relationship, the relationship will eventually break down.

A female participant responded with "*yes*" to the question whether the relationship would change by itself if one makes no attempt to change it. The inevitable changes are depicted as going "downstream", while effort are needed to maintain or strive for "upstream", she continued:

> Because I remember there is a Chinese proverb that says that, if you do not continue to go upstream, you will go downstream. Can't remember…不上… 逆舟 [学如逆水行舟，不进则退], it's like [rowing a boat] upstream if you don't try to make the effort to go up stream, it will just float downstream.

Another female participant who shared a similar view said:

> If I have a choice, I would make a change to the relationship. A relationship needs to be built up to a perfect one. So, if I don't make a change right, then this [the relationship] would never go on. So I think I will make a change to make a better one… something like that.

A male interviewee remarked on the topic whether relationships would change said:

> It depends… you can try to change certain things, or make an effort to improve or do differently. But I also don't really believe in trying to change people. I think for me [introducing change] is more like a matter of working something out, rather than trying to change things, more like come to a compromise. I guess it's like a change of expectations rather than [a] change of people's behavior.

Apparently the interviewee believes that effort is needed to keep the relationship going, and this could involve proactive management or changing own expectations or in the form of making compromise in relationships.

It was noted that, when proactive changes are concerned, interviewees often mentioned "we" rather than "I" or "he/she". One male interviewee highlighted the importance of working together as a couple for "changes" to reap any benefits. He said,

> …to maintain a relationship takes effort, both parties must actually work towards it… Imagine if a couple just do their own thing… there's no growth, there's no relationship, in fact it may even deteriorate…

The semi-structured interviews conducted with young adults in a local university identifies the important nature of changes perceived in intimate relationships. Male and female participants shares similar perceptions about changes in relationships. They perceives that inevitable change in relationships as being caused by various agents: self, others and the situation, as well as the experiences connected to coming of age. Central to these beliefs is the underlying need to curb any possible change or deterioration that might or might not occur as a natural part of relationship progression, by injections of positive changes to the relationships. This appears to correspond to the Chinese philosophical saying that things tend to go downstream if one does not do something to "hove upstream" to prevent it. The changes identified by participants appears to include both natural change (i.e., changes that are inherent in relationships), and induced change (i.e., managing change in relationships).

The findings of this qualitative study contribute to the conceptualization of relationship beliefs in Singapore young adults' beliefs of intimate relationships. The 16 themes are adapted into the construction of the questionnaire "Relationship beliefs about change" to be used in the large-scale quantitative study on relationship beliefs and attachment. Before that, the scale is subjected to validation in Study 2 via exploratory and confirmatory factor analysis.

CHAPTER 3: STUDY 2

Validation of Relationship Beliefs about Change

Relationship representations are enduring cognitions that play an important role in close relationships (Fletcher & Fitness, 1996). Existing relationship beliefs' measures often target specific beliefs about the behaviors of the partner and the self (e.g., Collins et al., 2004), rather than the relationship itself. Research on individuals' beliefs towards their relationships would provide an integrative approach in understanding close relationships, which entails beliefs and perceptions about the self, the partner, as well as the relationship. Relationship beliefs are informed by the cultural context and developmental niche which nurture them (Antonucci, Langfahl, & Akiyama, 2004). However, most of the past studies in relationship beliefs were conceptualized and conducted within the individualistic context. It is unclear regarding the content and organization of the construct of relationships change in Singapore Chinese, and how it influence their relationships. Therefore, in attempt to obtain coherent understanding regarding cognitive representation of relationships, the present thesis aims to develop a measure of relationship beliefs about changes in romantic relationships. Study 1 has explored the Singapore Chinese conception of change in relationships. The purpose of Study 2 is to assess the psychometric properties of the Relationship Beliefs about Change scale which was constructed utilizing the results from Study 1.

As described earlier, Study 1 attempted to clarify the construct of Relationship Beliefs about Change by interviewing participants regarding their personal views on what is change and what is responsible for it in romantic relationships. The responses gathered from the interviews of Study 1 were used to develop a questionnaire on

Relationship Beliefs about Change. Study 2 aims to perform validation tests to assess the psychometric properties of the new questionnaire. Hence, Study 2 involved examining of the internal structure of the relationship change construct via EFA and CFA, and validating the scale with conceptually relevant scales about relationship beliefs. Responses from the interviewees in Study 1 revealed three aspect of changes in relationship that appeared to be important to them: who and what are responsible for change in the relationship, change being inevitable in the relationship process, and change is itself needed to manage changing relationship. This suggests that the young adults' conceptualization of relationship change could be multifaceted, to include changes that come from individual's effort, as well as changes that arise naturally as a result of changes in external or environmental factors. In Study 2, the factor structure of the scale would be first examined via exploratory factor analysis, followed by confirmatory factor analyses on an alternative data set. It is hypothesized that the relationship beliefs about change of Singaporean Chinese would be a multi-dimensional construct. Hence, more than one factor solution is expected to emerge, with items that described both natural and induced change.

As for validation across other existing scales, it is expected that conceptually relevant scales would correlate significantly with Relationship Beliefs about Change; while conceptually irrelevant scales would have low or no correlation with Relationship Beliefs about change. The specific hypothesis for cross-validation with other scales would be listed in the Results section when the dimensions of the scale were confirmed by CFA. The scales chosen for the validation purposes include Implicit Beliefs about Intelligence (IBI), Implicit Theories of Relationships (ITR),

Relationship Beliefs Inventory (RBI), Experiences in Close Relationships (Revised) (ECR-R), and Relationship Assessment of Satisfaction (RAS).

The Implicit Beliefs about Intelligence (IBI) assesses the extent to which one believes that intelligence is fixed or malleable. Although it overlaps with RBC in terms of assessing malleability perceptions, however, RBC targets on relationships rather than personal attributes, the IBI would provide discriminant validity for the RBC. It is expected that there is only low or no relationship between RBC and IBI. On the other hand, Implicit Theories of Relationships (ITR) assesses the extent to which the individual endorses the destiny or the growth beliefs. As both RBC and IBI assess relationships beliefs related to the malleability perceptions (e.g., destiny beliefs denotes that the relationship which does not start well is unlikely to improve later), it is hypothesized to relate significantly to RBC and provides convergent validity.

Relationship Beliefs Inventory (RBI) assesses maladaptive beliefs that damage relationships. Two specific sub-scales of RBI were chosen to validate RBC, namely "Disagreement is destructive" and "Partner cannot change". It is expected that "Partner cannot change" would correlate significantly with RBC as both tap into the ability and likelihood of change in intimate relationships; specifically the dimension of "Managing Change", while "Inevitable Change" and "Agent of Change" would have low or no correlation with "Partner Cannot Change" as they do not assess directly the ability to make changes, especially "Inevitable Change" which mainly dealt with external factors affecting change. Similarly, the "Disagreement is destructive" sub-scale of RBI assesses different aspects of relationship beliefs, and thus it is hypothesized to have low or no relationship with the RBC scale. On the other hand, RBC taps perception and beliefs about whether relationship would stay the way it is,

in other words, it taps the consistency and stability of relationship in terms of whether and how might changes take place. This emphasis on the relationship representation would supplement attachment representations, which focuses mainly on the self-model and the other-model (Collins, et al., 2004). In this way, the Experiences in Close Relationship (Revised) (ECR-R), a widely used attachment measure, is selected to be included in the validation for discriminant validation. It is proposed that RBC would have low or no correlation with the ECR-R. However, it is noted that both attachment representations and relationship beliefs about change involves underlying the anxiety that might exist in intimate relationships. Hence the Anxiety dimension of ECR-R might have some low but significant relationship with RBC. Moreover, recalling that Managing Change beliefs that proactive effort is required to maintain relationships. Therefore, it is expected that the Avoidance dimension of ECR-R would be negatively related to Managing Change.

The Relationship Assessment of Satisfaction (RAS) scale is added as an outcome measure. It assesses the level of satisfaction derived from engaging in the relationship. In other words, RAS is chosen to provide the criterion to test the predictive validity of the RBC scale. Hence, it is expected that RBC would significantly predict RAS. Further observation of the items in each of the dimensions later derived from EFA and CFA, it is hypothesized that specifically, the dimension of "Managing Change" would positively predict satisfaction in relationship. Managing Change entails the belief that proactive effort would maintain or even salvage deteriorating relationship, hence it is expected to have positive relationship with satisfaction.

Prior to the validation exercise, the Relationship Beliefs about Change was tested for potential differences across genders, religions and relationship experiences in intimate relationships.

Method

Participants

Four hundred and one participants were recruited for the validation study. The participants were undergraduate students of a major university in Singapore, who were enrolled in an introductory psychology course and obtained partial course credit for their participation. They were Singaporeans or permanent residents of Singapore, and all of them were Chinese. The age of participants ranged from 18 to 29 years old ($M = 22.31$ for males, $SD = 1.29$; and $M = 20.31$ for females, $SD = 1.07$), with 200 males and 201 females. Among them, 269 participants indicated that they were dating someone at the time of completing the questionnaire, or had intimate relationships in the past. There were 71 Christians, 12 Catholics, 191 Buddhists or Taoists, 1 Muslim, 123 free-thinkers and 3 from other religions. It is noted that participants in Study 1 were not allowed to join Study 2. Hence, all the participants in Study 2 were different individuals from those in Study 1. Screening was done by the computer system, in which the students utilized to sign up for experiments.

Materials

A demographic information page and a battery of scales were administered during the study. Five scales that are meaningfully related to relationships and implicit beliefs were employed to assess the construct and discriminant validity of the

"Relationship beliefs" questionnaire. All questionnaires were presented in Appendix A.

Relationship beliefs about change. The scale was developed with qualitative data collected from the semi-structured interviews conducted earlier. It consisted of 16 recurrent themes obtained from the interview study, for instance, "Relationships change as people are unpredictable". The scale aims to assess participants' perspective about change in close relationships, particularly dating relationships. The term "change" is preferred over "malleable" in the questionnaire as this is the term most participants iterated during interviews, and "change" would be a more comprehensive term that may encompass more than the concept of malleability, including changes brought about by time (temporal changes) that occur by themselves and so on. Participants were instructed to respond according to their beliefs and expectations about changes in emotionally intimate relationships. Participants were required to indicate their perception on a Likert scale, ranging from 1 to 7, with higher scores indicating higher perceived change in relationships. The questionnaire obtained reliability alpha of .80 for the overall 16-item scale.

Experience in close relationships-revised (ECR-R) (Fraley, Waller, & Brennan, 2000). The ECR-R is a 36-item self-report measure on adult attachment. The scale assesses the rating of an individual's attachment style on two related dimensions, namely anxiety and avoidance. Each dimension has 18 items, to be scored on a Likert scale, ranging from 1 to 7, with higher scores indicating higher levels of insecure attachment on the respective dimension.

The scale obtained in earlier studies an internal reliability of alpha 0.95 and 0.93 for anxiety and avoidance sub-scales respectively. However, Fraley et al. (2000)

mentioned the limitation of the scale's fidelity in measuring lower levels of insecure attachment as opposed to higher levels. Sample items for the anxiety dimensions are "I'm afraid that I will lose my partner's love", and "I find that my partner(s) don't want to get as close as I would like". Items for the avoidance dimension include "I get uncomfortable when a romantic partner wants to be very close" and "I find it difficult to allow myself to depend on romantic partners". The internal reliability obtained for the current study was high at .90 for the anxiety dimension and .87 for the avoidance dimension.

Implicit beliefs about Intelligence (IBI) (Dweck, Chiu, & Hong, 1995). This questionnaire was chosen for exploring discriminant validity of the RBC scale. The IBI scale is based on implicit beliefs about human attributes, specifically intelligence, and assesses whether one believes that intelligence is a trait-like fixed attribute that cannot be changed (i.e., entity theory), or is malleable and can be improved (i.e., incremental theory). Although it measures similar properties as RBC regarding malleability, it targets the attribute of intelligence, which is a distinctively different attribute from relationship beliefs. It is hence expected that this scale will show only small or no association with RBC.

The scale consists of only three items, for example, "Your intelligence is something about you that you can't change very much". Participants would respond on a continuous scale ranging from 1 to 7. The scores are reverse-coded such that higher scores indicate greater endorsement of the incremental theory. Reported alpha for the IBI scale ranged from .94 to .98 in previous studies (Dweck, et al., 1995), and an alpha of .89 was obtained for the current study.

Implicit theories of relationships (ITR) (Knee, Patrick, & Lonsbary, 2003).

The ITR scale is a 22-item questionnaire that assesses the extent to which one subscribes to "destiny belief" and/or "growth belief" in romantic relationships, with each belief consisting of 11 items. Destiny belief refers to the belief of whether partners in the relationship are compatible and meant to be together, for instance, "Unsuccessful relationships were never meant to be", and "Relationships that do not start off well inevitably fail". On the contrary, growth belief refers to the belief that relationship problems can be overcome if one puts in the effort, for instance "With enough effort, almost any relationship can work", and "Challenges and obstacles in a relationship can make love even stronger". The ITR is measured on a 7-point Likert scale, with higher scores indicating greater adherence to the respective belief dimension. The reported alpha for destiny and growth beliefs were .82 and .74 respectively, and scores of the two beliefs are found to be independent of each other (Knee, et al., 2003). Internal reliabilities of the destiny and growth beliefs obtained for the current study were .84 and .75 respectively.

Relationship beliefs inventory (RBI) (Eidelson & Epstein, 1982). The RBI consists of five subscales that measure five different types of dysfunctional beliefs in romantic relationships. The five dysfunctional beliefs include expecting that partners are able to read each other's mind, disagreement among partners considered as a threat to loving relationships, believing that partners are unable to change themselves or the relationship, expecting partners to be perfect sexual partners, and stereotypical thinking about the differences among men and women. Each subscale has 8 items, to be administered on a continuous scale ranging from 1 to 7, with higher scores indicating greater adherence to the belief. In an effort to shorten the battery of scales

while maintaining sufficient information for validation, only two of the subscales, namely "Partner cannot change" and "Disagreement is destructive", were selected for the current validation study. Reported alpha coefficients for "Partner cannot change" and "Disagreement is destructive" were .72 and .81 respectively (Eidelson & Epstein, 1982). Internal reliabilities obtained for the current study were .62, and .80 for the two selected scales, respectively.

Relationship assessment scale (RAS) (Hendrick, 1988; Hendrick, Dicke, & Hendrick, 1998). The RAS is a general measure of the extent to which an individual is happy with the relationship for both marital and dating relationships. Since this is a measure of satisfaction toward the couple relationship, only 339 (instead of the total 401) participants with past or current experience in intimate relationships were included in the analysis. It consists of 7 items, to be scored on a 7-point Likert scale, with higher scores indicating higher levels of satisfaction, with item 2 and 7 coded in the reverse direction. Sample items include "How good is your relationship compared to most?" and "To what extent has your relationship met your original expectations"? Reported item-total correlation ranged from .57 to .76, with an alpha of .86 (Hendrick, 1988). The scale is selected to examine the predictive validity of the RBC scale in the current study. Internal reliability obtained for the current sample was .86.

Procedures

All participants were asked to complete a battery of questionnaires including Relationship Beliefs about Change (constructed for the present study), Experience in Close Relationships-Revised (Fraley, et al., 2000), Implicit Beliefs about Intelligence (Dweck, et al., 1995), Implicit Theories of Relationships (Knee, et al., 2003), two subscales of Relationship Belief Inventory (Eidelson & Epstein, 1982), and

Relationship Assessment Scale (Hendrick, 1998; Hendrick, et al., 1998). Participants were recruited from undergraduates in a local university, whereby participation in the study would contribute partial credit to an introductory Psychology course in which they were enrolled. Participants were required to complete the questionnaires within 30 minutes on campus.

Results and Discussions

Participants' mean responses on the scales are summarized in Table 2.   The data were first examined for mean differences on the demographic variables that were often regarded to have implications on relationship beliefs.

Gender, Religion and Past relationships

Participants' relationship beliefs about change were assessed for differences across gender, religious background, and whether they have had experience of being involved in intimate relationships. Independent T-test was performed on gender and prior or current experience in intimate relationships; ANOVA was performed across participants' religious affiliations. There were no significant mean differences across gender, $t(399) = .385$, ns; nor any significant differences between those who are currently dating or have had past experience of being engaged in romantic relationships, $t(399) = 1.905$, ns. Similarly, no significant mean difference was found across different religious background, $F(5, 395) = .674$, ns. It appears that relationship beliefs about change are held similarly among Chinese men and women as a fundamental attitude espoused towards life and relationships. Since it is a commonly shared belief, which is likely to develop from a young age, it does not require prior

experiences in romantic relationships, nor has it been significantly affected and

differentiated by such experience.

Table 2

Mean Responses of RBC and Validating Scales

_____

Scales	*M*	*SD*
RBC	5.00	0.62
IBI	3.96	1.47
Destiny Beliefs - ITR	3.79	0.87
Growth Beliefs - ITR	5.01	0.65
Disagreement - RBI	3.19	0.80
Partner Cannot Change - RBI	3.31	0.63
Anxiety - ECR-R	3.57	0.93
Avoidance - ECR-R	3.01	0.72
RAS	5.06	0.91

_____

Note. N = 401 (except for RAS which assesses the level of satisfaction in past intimate relationships, n=269, whereby only 269 out of 401 participants have experience in having intimate relationships with a partner)

RBC = Relationship Beliefs about Change; IBI = Implicit Beliefs about Intelligence; Destiny Beliefs - ITR = Destiny dimensions in Implicit Theories of Relationships; Growth Beliefs - ITR = Growth dimension in Implicit Theories of Relationships; Disagreement - RBI =Disagreement subscale of Relationship Beliefs Inventory; Partner Cannot Change - RBI = Partner Cannot Change subscale of Relationship Beliefs Inventory; Anxiety - ECR-R = Anxiety dimension of Experience in Close Relationship-Revised; Avoidance - ECR-R = Avoidance dimension in Experience in Close Relationships-Revised; and RAS = Relationship Assessment Scale.

All scales utilized the Likert scale rating of 1 to 7, with higher rating indicating higher endorsement of the attribute or belief.

Exploratory Factor Analysis (EFA)

The factorial dimension of the scale was assessed in two steps. Exploratory

factor analysis was first performed on the validation dataset to examine for underlying

dimensions of the scale. This was followed by confirmatory factor analysis using a new set of data collected in Study 3.

Data screening found 16 multivariate outliers that were removed from the analysis, resulting in 385 cases. Preliminary analysis showed that the scores have good factorability: the Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .79, and Bartlett's Test of Sphericity was significant at $p<.001$. In an attempt to examine the underlying dimensions of the scale, principal component analysis was performed on the 16-item RBC scale. An initial component extraction showed that there were five dimensions with eigenvalues greater than one. However, on observing the Scree plot, the amount of variance each factor accounted for and considering the meaningfulness of the dimensions, principal component analysis was re-run with Promax rotation, extracting three components.

Table 3

Eigenvalues and Variance Accounted by the Components obtained from PCA

	Component 1	Component 2	Component 3
Eigenvalues	4.25	1.74	1.43
Variance	26.58%	10.86%	8.92%

Note. PCA = Principal Component Analysis.

Table 4

Component Loadings for Exploratory Factor Analysis with Promax Rotation of the Relationship Beliefs about Change Scale

Scale Items	C1	C2	C3
1. Rps change when I change.	**.82**	-.22	.00
3. Rps change as individuals grow.	**.73**	-.05	.09
5. Rps change when my partner changes.	**.72**	-.10	-.03
4. Rps change when I am at different phases of my life.	**.71**	-.01	.00
2. Rps change when environment or situations change.	**.71**	.08	-.09
8. Rps change as it moves from stage to stage.	**.43**	.20	.20
15. Rps change when the relationship is not what I expected.	**.43**	.31	-.10
12. The longer the relationship, the more likely it will change.	-.22	**.71**	.03
13. Rps change because people like to experience the highs and lows in relationship, as the spice of life.	-.05	**.68**	-.20
14. Rps change when my perception of my partner changes after being in the relationship for some time.	.30	**.64**	-.12
6. Rps change as people are unpredictable.	.08	**.47**	.21
7. Rps change as change is the only constant in life.	-.10	**.42**	.31
10. Rps change to keep the relationship from going downhill.	-.10	-.14	**.84**
9. Rps change as a mean to compromise and work things out between partners.	.11	-.09	**.75**
11. Without progress, things will deteriorate eventually, so as rps.	-.05	.35	**.49**
16. Rps change when we change together as a couple.	.33	.04	.33

Note. Loadings > .40 are in boldface. Rps = Relationships.

As presented in Table 3, the first, second and third dimensions accounted for 26.58% (eigenvalues=4.25), 10.86% (eigenvalues=1.74) and 8.92% (eigenvalues=1.43) of the total variance respectively. The component loadings are presented in Table 4. Utilizing a cutoff point of .40, there were seven items loaded under the first component extracted, five items loaded under the second component, and three items loaded under third component. It was noted that there is one item (i.e., item 16) that failed to load under any dimensions given the cutoff point. This resulted in a 15-item scale after removing item 16.

The questionnaire Relationship Beliefs about Change was constructed to assess beliefs about the endurance and consistency in intimate relationships. The variables loaded under first dimension appeared to refer to the agents that might initiate change in intimate relationships, such as, "relationships change when I change", "relationships change when environment or situations change", and "relationships change as it moves from stage to stage". Hence, Factor 1 is named "Agent of Change" (i.e., AGC). It is apparent that Singaporean Chinese perceive that changes in relationships can arise from the self or the partner, the relationship itself, and/or the environment or context. When any of these attributes change, the relationship loses its consistency.

On the other hand, the five items in the second dimension appears to describe participant's belief about the inevitability or necessity of change in intimate relationships. Items in this factor includes "the longer the relationship, the more likely it is to change", "relationships change as people are unpredictable", and "relationships change as change is the only constant in life". This second factor describing the realistic perspective of changing people and world is named "Inevitable Change" (i.e.,

IC), as the items seem to suggest that relationships would inevitably change given sufficient time.

The third dimension consisted of three items, which put forth the perspective that change is needed in order to maintain or salvage relationships. This includes items such as "relationships change to keep relationships from going downhill" or "relationships change as a means to compromise and work things out between partners". In other words, it seems that the beliefs about change involve the belief that changes in relationships are needed to keep the relationship going. Without any intervention, the relationships are likely to deteriorate. Component 2 assesses realistic perceptions about inevitable change in relationships while Component 3 assesses the perspective that some changes might bring about positive outcomes to deal with the ever-changing romantic relationships. Hence, this third factor is named "Managing Change".

Factor correlations are presented in Table 5. All three dimensions were significantly correlated with each other. The positive correlations suggests that changes in relationships are more likely to be perceived as inevitable if more changes are expected of the relevant agents of change, such as the partner, the environment and so on. Correlation between Factor 2 and 3 suggests that the more one expects the relationship to change, the more effort to manage the relationship would be expected.

The overall RBC scale demonstrated reasonable internal reliability for 15 items at $\alpha = .79$. Alpha coefficients obtained for each subscales were as follows: Agents of Change ($\alpha = .79$ for 7 items), Inevitable Change ($\alpha = .60$ for 5 items), Managing Change ($\alpha = .62$ for 3 items).

Table 5

Correlations among Relationship Beliefs about Change's Factors obtained from EFA

_____

Factors	1	2	3
1. Agent of Change	-	.37**	.33**
2. Inevitable Change	.37**	-	.32**
3. Managing Change	.33**	.32**	-

_____

**p* < .01.

Confirmatory Factor Analysis (CFA)

As reported above, the RBC scale was constructed using recurrent themes reported by interviewees. EFA results reported earlier have identified three dimensions of the RBC scale, indicating that the beliefs about changes in relationships are fundamentally about (1) who or what makes the changes, (2) changes are inevitable, and (3) change management. Hence, the three dimensions are accordingly named (1) Agent of Change (i.e., who or what is essentially responsible for the change), (2) Inevitable Change (i.e., natural changes or downturns in relationship that is inevitable temporally or in accord with human nature), and (3) Managing Change (i.e., making changes to sustain the probable deterioration of relationships).

In order to obtain support for this three-dimensional structure of RBC observed in the exploratory factor analysis, CFA was conducted with a new dataset collected in Study 3 as a validating sample. The characteristics of 325 participants recruited for Study 3 are described under Study 3's method section. Data screening was performed and 13 multivariate outliers were deleted from the data, resulting in a sample size of

312. Some items from the original scale were modified for clarity after receiving
feedback from participants and considering their low communalities. For instance,
"Relationships change because people like to experience the highs and lows in
relationships, as the spice of life", was shortened to include only "Relationships
change because people like to experience highs and lows in relationships". Commonly
reported fit indices like the Chi-square (χ^2), the comparative fit index (CFI), the
incremental fit index (IFI), and the root mean square error of approximation (RMSEA)
are utilized to evaluate the fit of the model. The present study adopts the criteria that a
model is considered to have good fit if CFI and IFI exceed .90; while the RMSEA to
be near .06 within a 90% confidence Interval (Chen, Curran, Bollen, Kirby & Paxton,
2008; Hu & Bentler, 1999; MacCallum, Browne, & Sugawara, 1996).

Results of the fit indices from the initial run of CFA indicates unsatisfactory fit
of the model on the new data ($\chi 2$ (87) = 265.19, CFI =.76, IFI = .77, RMSEA = .08).
However, all paths coefficients estimated in the model were statistically significant at
$p < .01$, standardized loadings ranging from .20 to .76 across the three factors. Large
modification indices (i.e., MI) suggests the possibility for misspecification of the
model or substantial content overlapping (Byrne, 2010). Two pairs of error terms that
had much larger MI than the rest of the pairs of error terms were: error terms of item 1
and 5, and error terms of item 15 and 14.

On observing that item 14 "Relationship change when my perception of my
partner changes after being in the relationship for some time" seems to be a specific
example of and provides clearer explanation for item 15 "Relationships change when
the relationship is not what I expected", it was decided to drop item 15 from the
model. Close scrutiny of item 1 and 5 revealed that the two items are meaningfully

related, with item 1 referring to change in the self, while item 5 refers to change in the partner. Romantic relationships involve two very closely related persons, and the beliefs about change in the relationship essentially include beliefs about change in both parties. Therefore, error terms of item 1 and 5 were allowed to correlate and CFA was rerun on the 14-item scale. Results showed improved fit with AIC reducing from 331.19 to 273.14 ($\chi2$ (73) = 163.60, CFI .87, IFI = .87, RMSEA = .06). The fit was acceptable though not excellent.

A new exceptionally large MI was found between the error term of item 1 and 3. Item 3 "Relationships change as growth" apparently overlapped in meaning with item 1 "Relationships change when I change" for young adults. Hence, to further improve the fit of the model, these two error terms were allowed to correlate. The resulting model indicated satisfactory fit with $\chi2$ (72) = 135.34, CFI =.91, IFI = .91, RMSEA = .05. Significant change in chi-square ($\Delta\chi2$ (1) = 28.26, $p < .01$, revealed that the model with more paths better represented the beliefs about change in relationships. All latent factors were significantly correlated, and all parameters estimated in the three-dimensional model of RBC were significant at $p < .01$, with standardized coefficients ranging from .20 to .78. Figure 1 shows the resulting model with 14 items, and two pairs of related error terms.
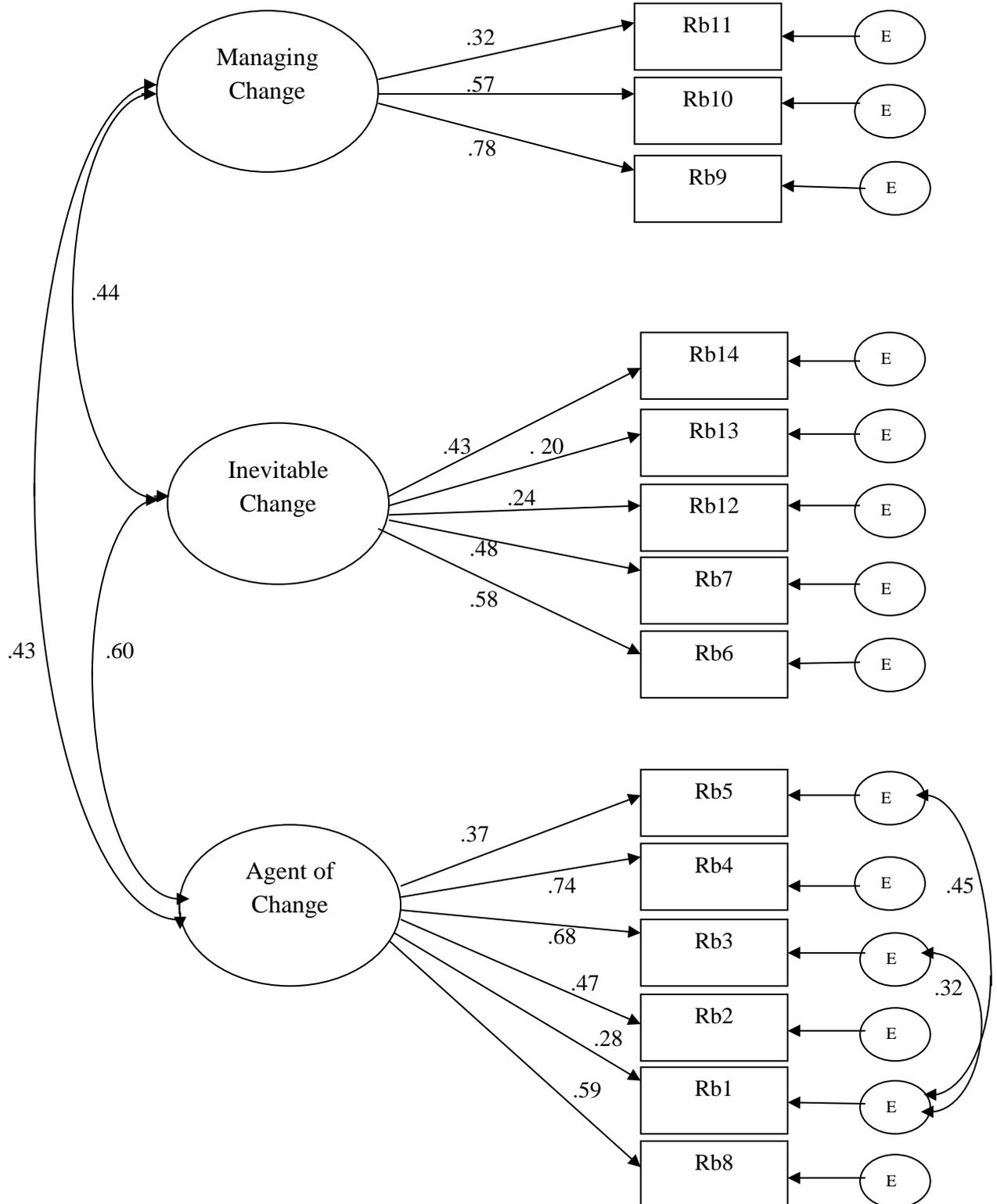
Figure 1. Confirmatory factor analysis on relationship beliefs about change. All paths were significant at *p* < .01. Fit indices were χ2 (72) = 135.34, CFI = .91, IFI = .92, RMSEA = .05.

Convergent, Discriminant and Predictive Validity

Convergent validity of the scale is demonstrated when the scale has moderate to high correlations with measures of conceptually related constructs; and discriminant validity is observed if the scale has low or no correlation with measures of less or non-related constructs. Correlations were computed to examine the RBC scale for convergent and discriminant validity. The correlations are reported in Table 6.

Table 6

Correlations among RBC, IBI, ITR, RBI, ECR-R, and RAS

Scales	*AC*	*IC*	*MC*
IBI	-.13**	-.17**	-.07
ITR - Destiny Beliefs	.08	.26**	.00
ITR - Growth Beliefs	.21**	.16**	.39**
RBI - Disagreement	-.02	.11	-.15**
RBI - Partner Cannot Change	-.09	.09	-.27**
ECR-R - Anxiety	.06	.19**	-.07
ECR-R -Avoidance	-.11	.05	-.24**
RAS	.02	-.11	.23**

Note. $N = 401$ (except for Satisfaction, $N=269$, due to the exclusion of those who have never been involved in romantic relationships)
AC = Agent of Change; IC = Inevitable Change; MC = Managing Change; RBC = Relationship Beliefs about Change; IBI = Implicit Beliefs about Intelligence; ITR = Implicit Beliefs about Relationships; RBI =Relationship Beliefs Inventory; ECR-R = Experience in Close Relationship-Revised; RAS = Relationship Assessment of Satisfaction.
**$p < .01$.

One of the validating scales, the IBI, measures the beliefs about whether intelligence is fixed or malleable. As expected, there was a significant but low relationship between IBI and Inevitable Change (r (399) = .17, p<.01), and between

IBI and Agent of Change (r (399) =.13, p<.01), suggesting some overlapping facets assessed by the two scales as both refer to people's underlying beliefs about the changing reality. However, there was no significant relationship between IBI and Managing Change, providing discriminant validity for RBC as a measure of implicit beliefs in the relationship domain. The Managing Change facet suggests that people make changes to the relationship in order to deal with the perceived inevitable and deteriorative change; this distinguishes RBC from other implicit beliefs such as the IBI.

The ITR scale assesses whether individuals endorse destiny beliefs or growth beliefs about romantic relationships. People who adhere to destiny beliefs would think that successful relationships rely on finding the ideal partner; while people who subscribe to growth beliefs think that good relationships are cultivated and developed. The significant correlations between RBC scale and the ITR scale supported the validity of the RBC. A closer look revealed that only the Inevitable Change dimension was positively related to Destiny Beliefs in the IBC (r (399) =.26, p < .01), but not Agent of Change or Managing Change. This is expected, as destiny beliefs focus on finding an ideal fit in relationships rather than working on the relationship to achieve a fit. It is likely that people who subscribe to destiny beliefs do not think that there is a need to work on the relationship to sustain it. If the partners are compatible, things would go smoothly. Conversely, growth beliefs appeared to be significantly related to all three dimensions of the RBC. The association between growth beliefs and Managing Change is especially substantial (r (399)= .39, p<.01) as both factors are related to employing effort in supporting or developing a stable relationship, regardless of underlying differences in the expectation of relationships' nature and

progress. In contrast, Agent of Change and Inevitable Change have much lower

correlations with growth beliefs (r (399) =.18 p < .01 and r (399) = .13, p < .01

respectively). It is noted that growth beliefs entail the perspective that effort could

improve a less than ideal relationship, which partly overlaps with the Managing

Change belief on the proactive effort deemed necessary to maintain or develop a

relationship.

RBC was also examined for its relationship with another existing scale about

relationship beliefs, the RBI scale. Among the two subscales of the RBI, Partner

Cannot Change showed moderate relationship with MC (r (399) = -.27, p <.01),

Disagreement is Destructive showed significant but low association with MC (r (399)

= -.15, p<.01). Both subscales of the RBI were unrelated to the other two dimensions

of RBC (i.e., Agent of Change and Inevitable Change). Results revealed that RBC can

be distinguished from other relationships' measures that tap into different aspects of

relational beliefs. The negative relationship between Partner Cannot Change and

Managing Change, and between Disagreements is Destructive and Managing Change,

suggested that maladaptive beliefs about one's partner are negatively related to one's

effort to maintain or salvage a deteriorating relationship. Hence, results showed some

overlapping facets measured by Managing Change, Partners Cannot Change, and

Disagreement is Destructive; while Agent of Change and Inevitable Change are

independent of the two sub-factors of RBI. It seems that the certainty of changing

relationships is not simply about malleability or the ability to change.

Further validation was provided by associating the ECR-R scale with the RBC.

Attachment anxiety was found to be positively related to Inevitable Change (r (399) =

.19, p <.01) but not related to the other two factors of RBC; while attachment

avoidance was negatively related to Managing Change (r (399) = -.25, p <.01), but did not correlate with Agent of Change and Inevitable Change of the RBC scale. A realistic outlook on the ever changing nature of relationships appeared to be associated with attachment anxiety, and people with avoidant style of attachment seemed to believe that any effort to change is unlikely to salvage the deteriorating relationships. It is noted that attachment-related patterns differ across individuals owing to the type and compositions of the internal working models of attachment that individuals' held. The two dimensions of adult attachment are indeed varying combinations of working models of self and others (Collins, et al., 2004). Since results demonstrated that Agent of Change and Managing Change were independent of Anxiety, while Inevitable Change and Managing Change were independent of Avoidance, this suggests that these beliefs might account for areas that the working model of self and other in attachment did not manage to capture.

Additionally, Relationship Assessment Scale (RAS) measures how much a person is satisfied with his or her relationship. The dimension of Managing Change of RBC was found to be significantly associated with RAS. People who are high in Managing Change are more likely to be satisfied with their relationship. This result provided predictive validity to the RBC. Overall, the results demonstrated acceptable properties of the RBC scale in terms of convergent, discriminant and predictive validity through examining the relationships between RBC scale and other related relationships scales.

In sum, Study 1 and 2 were exploratory studies aimed at understanding the young people's beliefs about changes in romantic relationships and to provide a detailed assessment of such beliefs. The validation study examined the psychometric

properties of RBC by examining the underlying structure of the scale. The three dimensions of RBC were first identified in EFA, and were supported in CFA on a second dataset. CFA results showed that the three dimensional structure of RBC explained the current data well, and that the dimensions were moderately related to each other. The relationships between the three dimensions of RBC and various close relationship scales, or measures about the perspective of change, were examined for convergent and discriminant validity. Apparently, people's beliefs about change in intimate relationships could be represented by three main facets identified in the factor analysis, namely Agent of Change, Inevitable Change, and Managing Change. It seems that Singaporean Chinese believes that relationships are bound to change if they are left to run their own course. Change may stem from either party in the relationship, the inevitable changes that result from a relationship's natural growth and development, and the changing environment and perceptions of the partners. However, the presence of MC as a distinct factor suggests that it is this belief of inevitable change that motivates Chinese to introduce changes or put in effort to delay or stop relationships from deteriorating.

This new multidimensional construct of change beliefs could be understood as a cognitive representation of relationship consistency and stability, in supplement to our knowledge about the representations of self and others as described in attachment studies (e.g., Pietromonaco & Barrett, 2000). It is purported that this relationship representation, is intimately related to self and others cognitions, and would lead to important consequences on relationship outcomes. Study 3 examines the beliefs about change in relationship in association with attachment cognitions and the consequences.

CHAPTER 4: STUDY 3

The Integrated Model of Relationship Beliefs, Attachment and Relationship

Persistence

According to attachment theories, attachment models or representations are formulated from early interactions with the caregiver during infancy and childhood, and later transferred to romantic relationships (Hazan & Shaver, 1987). This continuity is made possible by the mental models of self and others in attachment relationships (Bowlby, 1973/1976; Cassidy 2000). However, while cognitive models concerning the relationship per se are important, they are as yet overlooked in attachment research. Relationship beliefs are higher and abstract form of knowledge representations. Through these relationship representations, the relational dyad is viewed as a unit (Solomon & Knobloch, 2001). This would complement the self and other representations in the attachment model, in that together they can provide a more coherent and comprehensive understanding about intimate relationships. Furthermore, researchers (e.g., Collins, 1996; Whisman & Allan, 1996) has suggested the complementary effect of attachment and relationship beliefs in understanding and influencing the way people engage in relationships. As secure attachment relationships provide a stable and relatively unchanging care and support to individuals (Mikulincer & Shaver, 2007), it is probable that the beliefs about relationships' consistency and endurance are essentially perceptions resulting from the internal working model of attachment, which in turn impact on adult relationship behaviors. The perceptions of consistency and endurance of relationship is conceptualized in the present thesis as beliefs about whether relationships will continue and stay the way it is, sustaining its status quo. It is expected that insecure attachment would give rise to more

changeability perceived. It is observed in Study 1 and 2 that the local change beliefs include intertwining beliefs about unavoidable change in relationships that coupled with effort to change that is essential in dealing with the perceived change, therefore, it is proposed that higher endorsement of changeability would predict higher persistence in troubled relationships. The imminent change perceived would alert and motivate individuals to work on their relationships.

Hence, in an attempt to build an integrated model of attachment and beliefs about intimate relationships, Study 3 aimed to establish, firstly, the association between child attachment and adult attachment in predicting persistence in relationship during conflicts (see Figure 2), followed by the association between adult attachment representations (as measured in Anxiety and Avoidance) and relationship beliefs about change in predicting persistency in the face of conflicts (see Figure 3). Since relationship representations, including attachment, are expected to derive from early childhood experiences, it is expected that attachment representations formed in early childhood years would contribute to adult attachment measured in terms of Anxiety and Avoidance. More importantly, insecure attachment and its accompanying anxiety would be related to the realistic outlook regarding changes in relationships as being inevitable. Therefore, it is hypothesized that there would be a direct effect of child attachment on adult attachment, and a direct effect of adult attachment on relationship beliefs about change.

The resulting integrated model hence emerged, whereby adult attachment having roots in child attachment, contributes to the dyadic level of representation about the relationship itself (conceptualized as relationship beliefs about change), and in turn, both adult attachment and relationship beliefs about change predict persistence

in intimate relationship (see Figure 4).This study focused on the cognitive process of persistence prior to behavior enactment to examine intended persistence with the relationship despite conflicts. In sum, the present investigation aimed to capture all three aspects of relational representations: the self, the partner, and the relationship, with relevance to reliable and enduring intimate relationship.
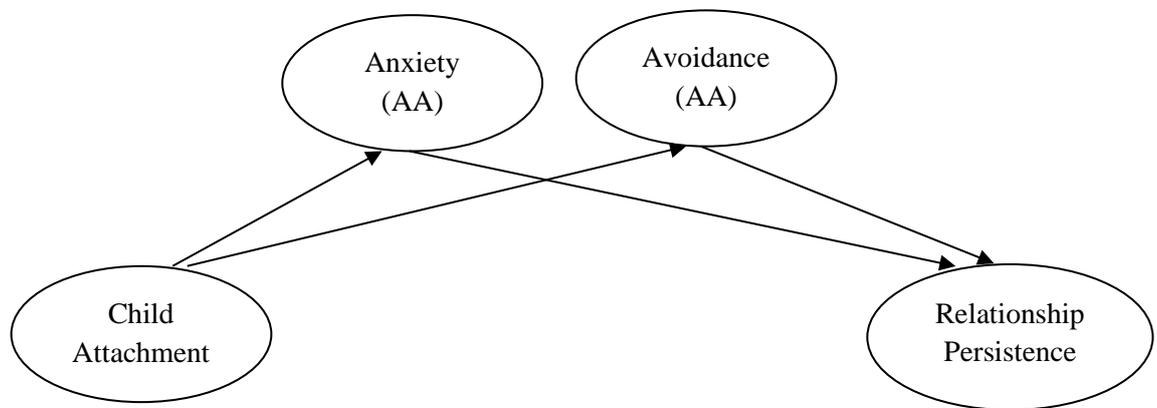
Figure 2. The first hypothesized sub-model of CA, AA, and relationship persistence. CA=child attachment; AA=adult attachment.
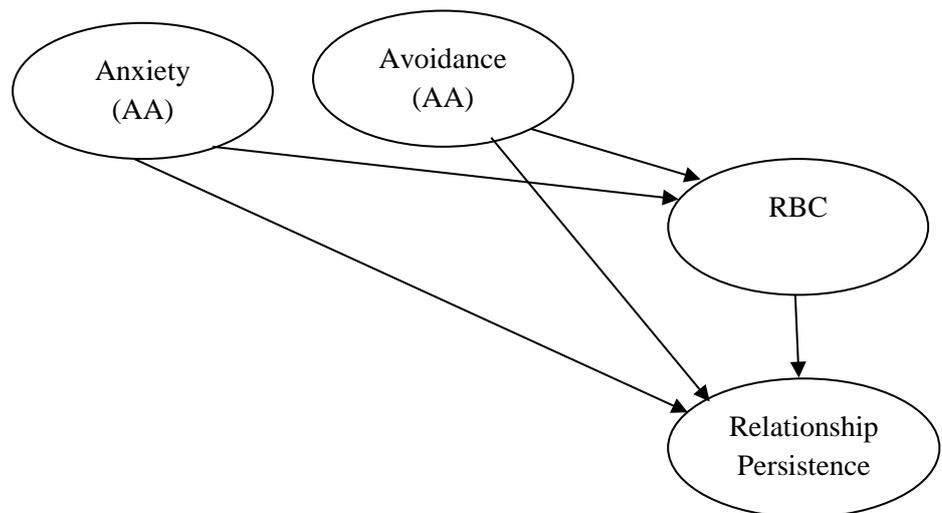
Figure 3. The second hypothesized sub-model of AA, RBC and relationship persistence. AA=adult attachment; RBC=relationship beliefs about change.
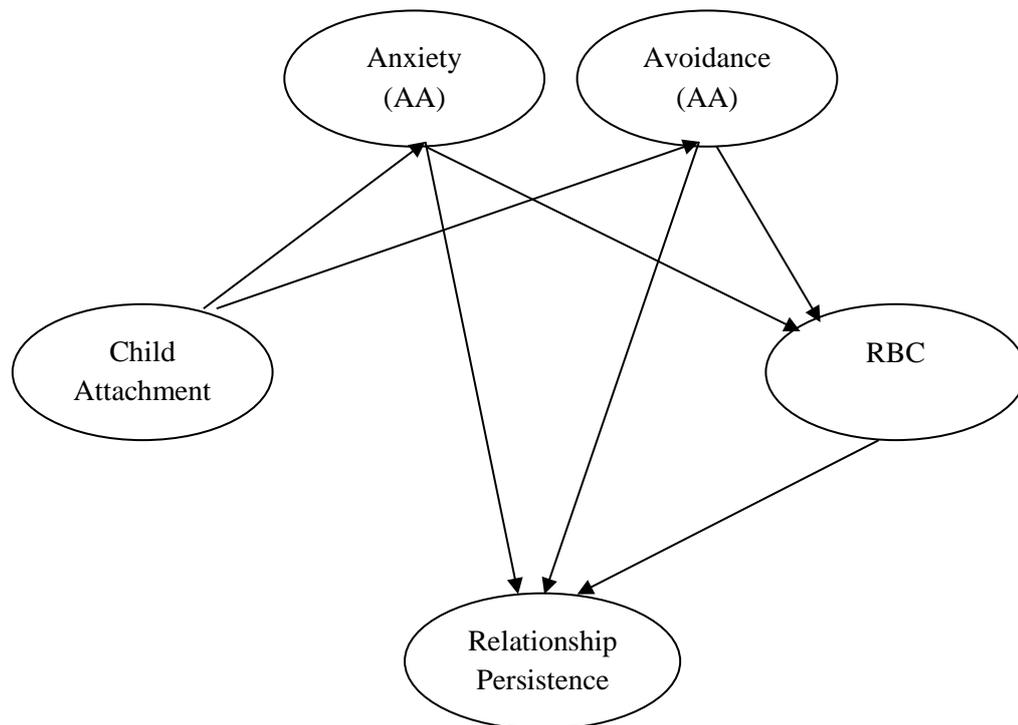
Figure 4. The hypothesized integrated model of CA, AA, RBC and relationship persistence. CA=child attachment; AA=adult attachment; RBC=relationship beliefs about change.

Method

Participants

Three hundreds and twenty-five students of the same university were recruited for the present study. Among the participants were 120 males and 205 females. They participated to gain partial credit for an introductory Psychology course. All participants were ethnic Chinese. Participants ranged in age from 18 to 29, with mean age of 22.32 years old (*SD* = 1.51) for males and mean age of 20.16 years old (*SD*=1.15) for females. Only participants who were Singaporean Chinese and dating at the time of study or had dating experiences prior to the study were included. Eighty-

one of them were Christians (Protestants or Catholics), 119 were Buddhists or Taoists, and 125 were free-thinkers. Similar to the previous study, only students who have not participated in Study 1 and 2, were allowed to take part in this study. Hence, participants in Study 3 were not the same individuals from Study 1 and 2. Screening was done by the computer system, in which the students utilized to sign up for experiments.

Materials

A set of five pen-and-paper questionnaires were administered to the participants. ECR-R and RAS were the same scales used in Study 2. The other three questionnaires (presented in Appendix B) were:

Relationship beliefs about change (revised) (RBC). As mentioned, RBC scale was validated in Study 2, and the three dimensions found were further confirmed with CFA on a separate dataset. The resulting scale consists of 14 items measuring individuals' beliefs about change in intimate relationships. The construct of change beliefs in intimate relationships has three dimensions: Agents of Change, Inevitable Change, and Managing Change. Agents of Change has 6 items (α=.72), which refers to the characteristics and agents pertaining to changes in relationships; Inevitable Change has 5 items (α=.47), which describe a realistic outlook that relationship will change for better or for worse eventually in time and space; and Managing Change has 3 items (α=.56) that reveals the likelihood of engaging in dynamic intervention in response to deteriorating relationships. Cronbach's alpha obtained for the full scale in Study 3 was .71.

Child attachment. Child attachment has been operationalized in Ainsworth's strange situation (Ainsworth et al., 1978), as behaviors observed during and after separation from the caregivers. Three patterns of behaviors emerged from Ainsworth's observation, namely secure attachment, ambivalent attachment and avoidance attachment (Hazan & Shaver, 1987). For the current cross-sectional study it was not possible to observe the participants when they were young. It was suggested that people has exceptional memory for events that are laden with emotions (Rubin & Friendly, 1986), while attachment and separation would likely be emotionally experienced. Adult memories of their relationship with parents in the past were found to associate with their current attachment behaviors (Hazen, & Shaver, 1987). Also, past research on the stability of attachment influence and how it would affect the individuals in adult life, utilized retrospective reports and the outcomes were in-line with the expectations and assumptions of attachment theories (Feeney & Noller, 1996). Hence, we operationalized child attachment by asking the participants to give an account of their earliest possible recollection of separation experience and the emotional reactions they exhibited on reunion with the caregivers.

This was obtained via in-depth interviews, tapping their critical separation experience and documenting descriptions of their emotional reactions. Fifty participants (different from those recruited in Study 1) were interviewed and asked to provide a retrospective account of their childhood experiences with their care takers, specifically their experience of separation from the main caregiver. We asked them to describe as explicitly as possible their emotional experience at that time; for instance, cried briefly or cried for a long period of time, or felt upset but did not expressed in

terms of crying and so on. The resulting descriptions were then coded into

Ainsworth's attachment categories (Ainsworth et al., 1978) from the strange situation.

These descriptions were then utilized as child attachment descriptions in Study

3 with reference to Ainsworth's attachment typologies (Ainsworth et al., 1978).

Participants were asked to recall the earliest possible incident that they could

remember about being separated from their caregivers, and what their immediate

reactions were when reunited with their caregiver after separation. The child's

attachment tendencies would be manifested and especially salient in the behavioral

responses he or she exhibited on reuniting with the caregiver, as this was assumed to

reveal the individual's presuppositions and expectations of the caregiver, in providing

security (Grossmann & Grossmann, 2003).

Participants in Study 3 were asked to rate, on these example-responses

obtained in the previous interviews, how accurately the statements described them on a

scale of 1 to 7 (1 being "not at all like me" and 7 being "very much like me"). The

mean age of earliest recollection was 5.59 (SD=1.69), which coincided with the

literature's suggestion that preschool years would be the more stable and valid age to

examine child attachment (e.g., Thompson, 2002). Two items (i.e., item 2 and 7) were

in a negative direction and needed to be recoded into the same direction as the rest of

the items. Higher rating indicates higher insecurity in attachment relationships during

childhood.

Relationship conflicts and persistence. The present study attempts to

examine the cognitive process experienced during conflicts as an indicator of the

effect of change beliefs. Firstly, we interviewed 50 Chinese Singaporeans (same

participants in child attachment interviews) to obtain the content or type of conflicts

they most often experienced in romantic relationships. Four types of conflicts most frequently experienced by Chinese Singaporeans were then used in Study 3. This includes being unhappy about the partner getting close to or going out with another friend of the opposite gender, wanting the partner to spend more time than he or she is willing to, partner not reciprocating the same amount of care and concern, and expecting the partner to disclose more than he or she would. Participants are also asked to indicate any other frequent conflicts they experienced with their partner but are not mentioned in the above example conflicts.

The first step towards dissolution of the relationship often starts from the ideation of exiting the relationship prior to behaviors of breaking up or staying on in the relationship (Hinde, 1997). Just as relational transitions could occur when someone violates the implicit "standard" in a relationship, however, it is the perceptions of conflicts and the resulting cognition provides the settings for such transitions (Conville, 1988). Hence, cognitions regarding resolving the relationships' conflicts were taken as an approximate to individuals' likelihood to persist in the relationship in face of problems and conflicts. Participants are asked whether they would think of giving up the relationship during the respective example conflicts and how frequently they have such ideas. For each conflict, those who responded "yes" were coded as -1, while those who responded "no" were coded as +1. The responses were then summarized across all five conflicts as an approximate continuous measure for how likely one would think of persisting or giving up the relationship in the midst of conflict. In this way, higher scores indicate more likely to persist in the relationship in face of conflicts.

Procedures

All participants were asked to complete a battery of questionnaires including Relationship Beliefs about Change, Experience in Close Relationships-Revised (Fraley et al., 2000), Relationship Assessment Scale, a questionnaire about childhood attachment experience and a questionnaire constructed for the present study which taps the ideation of giving up the relationship in times of conflicts. All participants were asked to complete the battery of questionnaires within 30 minutes on campus.

Results and Discussions

Means and standard deviations of the observed variables are summarized in Table 7, and the correlations among the variables are presented in Table 8. Thirteen outliers were removed from the analysis and the resulting sample size is 312. Descriptive data showed that the means for the three dimensions of relationship beliefs about change ranged from 4.56 ($SD = .79$) to 5.34 ($SD = .71$), with an overall scale mean of 4.58 ($SD= .46$), suggesting an inclination towards a changeable relationship view. For adult attachment, participants obtained higher scores in Anxiety ($M = 3.68$, $SD = 0.97$) than in Avoidant ($M = 2.85$, $SD = 0.83$). It seems that local young adults are more likely to be attachment anxious than attachment avoidant.

As discussed in Study 2, the dimension of Managing Change seems to be based upon the beliefs that change is imminent and unavoidable, whether it is changes brought about by agents, or changes that occur naturally during the lapse of time. It seems that Managing Change would not be activated nor meaningful without the perception of change (both induced and natural change) characterized by the other two dimensions (i.e., Agent of Change and Natural Change). In this way, the three

dimensions are deemed to be intimately intertwined and likely inseparable in their

functioning and effects. Furthermore, in keeping the ratio of sample size to number of

parameters estimated to be 5 or more (Bentler & Chou, 1987), therefore the RBC scale

was utilized as a model with second-order factor after examination for presence of

higher-order factor with the adult attachment measure. Details of the second-order

analysis are included in Appendix C.

Table 7

Mean Responses of Relationship Beliefs about Change, Relationship Persistence,
Adult Attachment and Child Attachment in Study 3

_____

Scales	*M*	*SD*
RBC (full scale)	4.58	0.46
AGC	5.34	0.71
IC	4.56	0.79
MC	4.96	0.96
Persist	2.90	2.02
Anxiety	3.68	0.97
Avoidant	2.85	0.83
Child Attachment	2.61	1.11

_____

Note. N = 312 (after deletion of 13 outliers). RBC = Relationship Beliefs about Change;
AGC= Agent of Change; IC= Inevitable Change; MC= Managing Change; Persist=
Relationship Persistence; Anxiety=Adult Attachment (ECR-R); Avoidance= Adult
Attachment (ECR-R); CA=Child Attachment.

Table 8

Correlations among the variables in Study 3

Variables	AGC	IC	MC	Persist	Anxiety	Avoidance	CA
AGC	-	.33**	.25**	-.12*	.02	-.16**	-.07
IC	.33**	-	.28**	-.09	.12*	.06	.11*
MC	.25*	.28*	-	.04	.10	-.17**	-.09
Persist	-.12**	-.09	.04	-	-.19**	-.19**	-.16**
Anxiety	.02	.12*	.10	-.19**	-	.32**	.24**
Avoidance	-.16**	.06	-.17**	-.19**	.32**	-	.23**
CA	-.07	.11	-.09	-.16**	.24**	.23**	-

Note. N = 312 (after deletion of 13 outliers)
AGC= Agent of Change; IC= Inevitable Change; MC= Managing Change; Persist= Relationship Persistence; Anxiety=Adult Attachment (ECR-R); Avoidance= Adult Attachment (ECR-R); CA=Child Attachment.
*p <.05,**p < .01.

The aim of the study is to understand the association between RBC and attachment, and their influence on relationship cognition. The hypothesized model (Figure 4) depicts the relationships between Relationship Beliefs about Change (RBC), Adult Attachment (AA) (as measured in Avoidance and Anxiety dimensions), and Child Attachment (CA), and how they affect the tendency to stay in the relationships despite facing conflicts (i.e., Relationship Persistence). This was tested in three steps, with the first step aimed at clarifying the associations between child and adult attachment, and how they might contribute to relationship persistence. This involves a sub-model (see Figure 2) consisting of four latent variables: Relationship Persistence, Child Attachment, and Adult Attachment (measured in two dimensions: Anxiety and Avoidance). This sub-model hypothesizes that attachment patterns formed during childhood years would contribute to adult attachment, and this in turn affects whether people would persist during relationship conflicts.

Structural equation modeling (SEM) via AMOS was performed on data collected from 312 (after deleting 13 multivariate outliers) Singaporean Chinese. Maximum likelihood estimation, which is robust to standard error and provides adjusted chi-square (Sartorra & Bentler, 1994), was applied to the model in view of skewed responses in Relationship Persistence. The first hypothesized sub-model showed reasonable fit, with χ^2 (163) = 365.09, CFI .92, IFI = .92, RMSEA = .06. As presented in Figure 5, all path's coefficients were statistically significant at $p < .05$. This confirmed the positive associations between childhood attachment and adult attachment, while anxiety and avoidance in adult attachment in turn, contributed negatively to persistence in close relationships among couples.
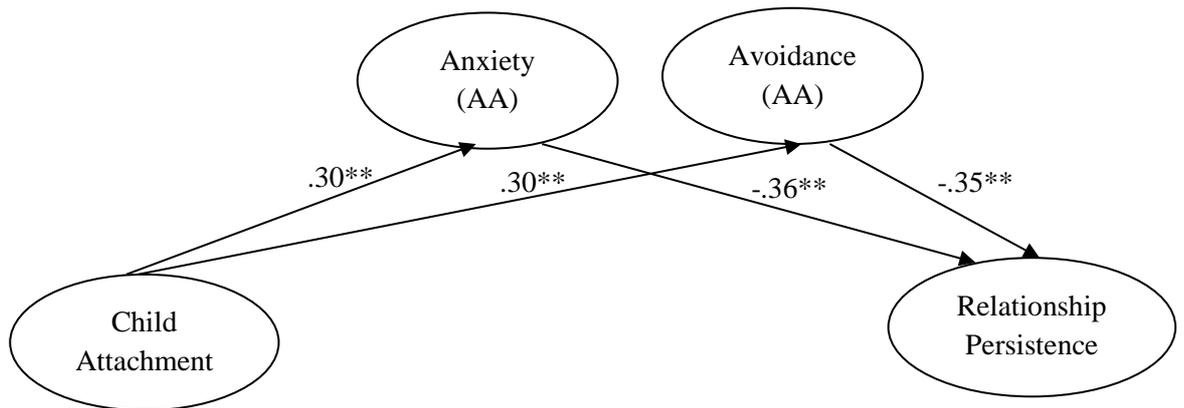
Figure 5a. SEM results of the first hypothesized sub-model of CA, AA, and Relationship Persistence. All paths were significant at ** $p < .01$. CA=child attachment; AA=adult attachment. Fit indices were χ^2 (163) = 365.09, CFI = .92, IFI = .92, RMSEA = .06.
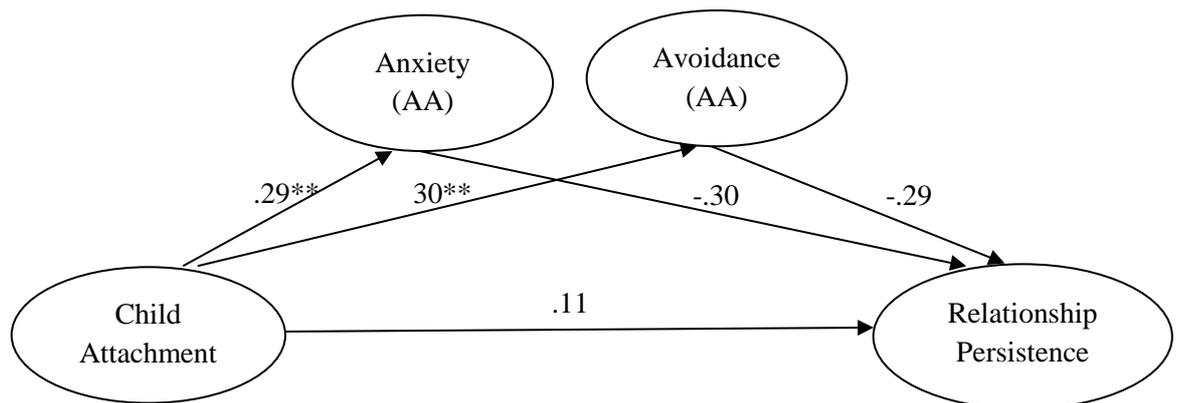
Figure 5b. The alternative sub-model CA, AA, and relationship persistence, with additional pathway from CA to relationship persistence. CA=child attachment; AA=adult attachment. ** $p < .01$; * $p < .05$. All paths were significant except the additional path from CA to relationship persistence. Fit indices were χ^2 (162) = 362.30, CFI = .92, IFI = .92, RMSEA = .06.

Some researchers has contended that early attachment might implicate adult relationships directly, specifically relationship quality (Holland & Roisman, 2010). It is probable that child attachment might have effect on relationship persistence. Hence, for comparison purpose, an alternative model (see Figure 5b) was tested, by adding a pathway from Child Attachment to Relationship Persistence. However, SEM analysis conducted on the alternative model showed that the additional pathway was not

significant, and the improvement in the model fit was negligible ($\Delta\chi^2$ (1) = 2.71, n.s.).

Hence it is decided to keep the originally proposed model (i.e. Figure 5a). After

establishing the associations between child and adult attachment, the current study

proceeded with the second sub-model (see Figure 3) to identify the relationships

between adult attachment and relationship beliefs about change. There were four latent

variables: RBC, Anxiety of AA, Avoidance of AA, and Relationship Persistence. It

was hypothesized that adult attachment (as measured in Anxiety and Avoidance

dimensions) would contribute to RBC, while both AA and RBC predicted

Relationship Persistence. SEM results (see Figure 6) showed that the fit of the model

was acceptable with χ^2 (112) = 291.88, CFI .91, IFI = .92, RMSEA = .07 (with

confidence interval of .06 to .08).

Anxiety in AA contributed positively to RBC, while Avoidance in AA

negatively predicted RBC. Both dimensions of AA negatively predicted Relationship

Persistence. All paths coefficients were significant at $p < .05$ except for the path

leading from RBC to Relationship Persistence. Since the path from RBC to

Relationship Persistence did not contribute significantly to Relationships Persistence,

an alternative model without the non-significant path from RBC to Relationship

Persistence was tested. Chi-square difference test between the two models was not

significant, with $\Delta\chi^2$ (1) = 2.31, n.s., indicating that both models could explain the

data but the more parsimonious model would be preferred. Although the pathway from

RBC to persistence was not statistically significant, however it revealed substantial

effect (-.28) that warrant further investigation. Therefore, in order to keep residual to a

minimum, and as an attempt to further investigate the conceptually meaningful

relationship between RBC and Relationship Persistence, it is decided to keep this path

in the final hypothesized full model. It is hoped that the relatively large but

insignificant effect of RBC on Relationship Persistent could be further explored in the

full model. It is possible that RBC has beneficial effect on Relationship Persistence

though the content of the construct might obscure such effect, reducing it to non-

significant. For instance, believing that relationships would inevitably change might

operate in opposite direction towards Relationship Persistence. Hence, further

investigation is needed.
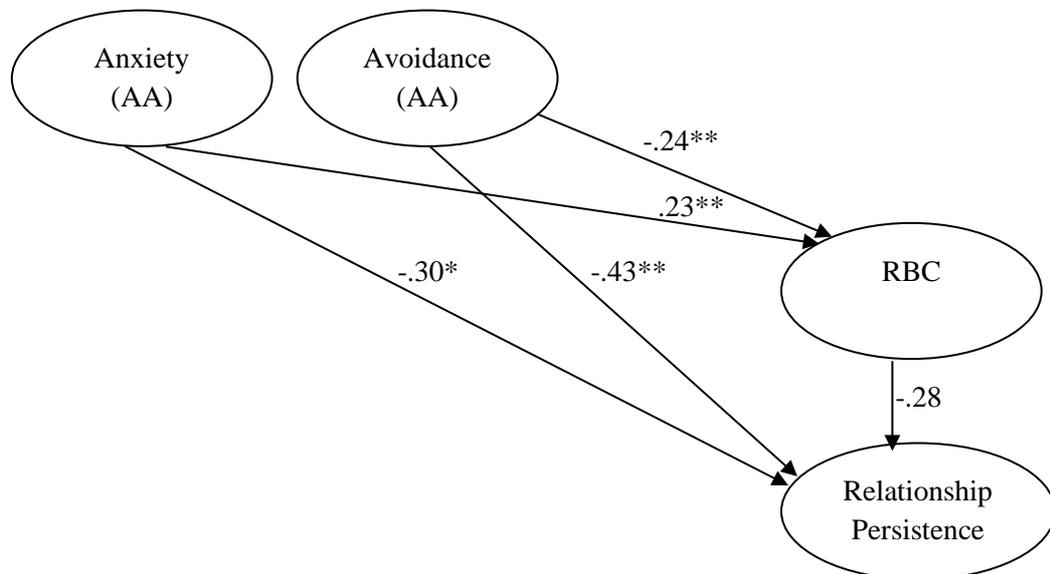
Figure 6. SEM results of the second hypothesized sub-model of AA, RBC, and Relationship Persistence. AA=adult attachment; RBC=relationship beliefs about change. *$p <.05$, ** $p < .01$. Fit indices were χ^2 (112) = 291.88, CFI = .91, IFI = .92, RMSEA = .07, with confidence interval of .06 to .08.

After gaining full support for step one and partial support in step two, the study

proceeded to integrate the first two steps into the final model of relationship cognitions

and attachment. As discussed earlier, adult attachment has its roots in attachment

relationships during childhood years, which in turn predicts adult relationship

cognitions concerning consistency and endurance in romantic relationships. It is

expected that adult attachment contributed to relationship beliefs about change, while both attachment cognition and change beliefs would have effects on relationship persistence in times of conflicts. Hence, the final hypothesized model (see Figure 4) consists of five latent variables (Child Attachment, Anxiety (Adult Attachment), Avoidance (Adult Attachment), Relationship Beliefs about Change, and Relationship Persistence. In this way, Relationship Beliefs about change becomes the emotional-cognitive result of attachment experience that might have started from young childhood and translated into adult attachment.
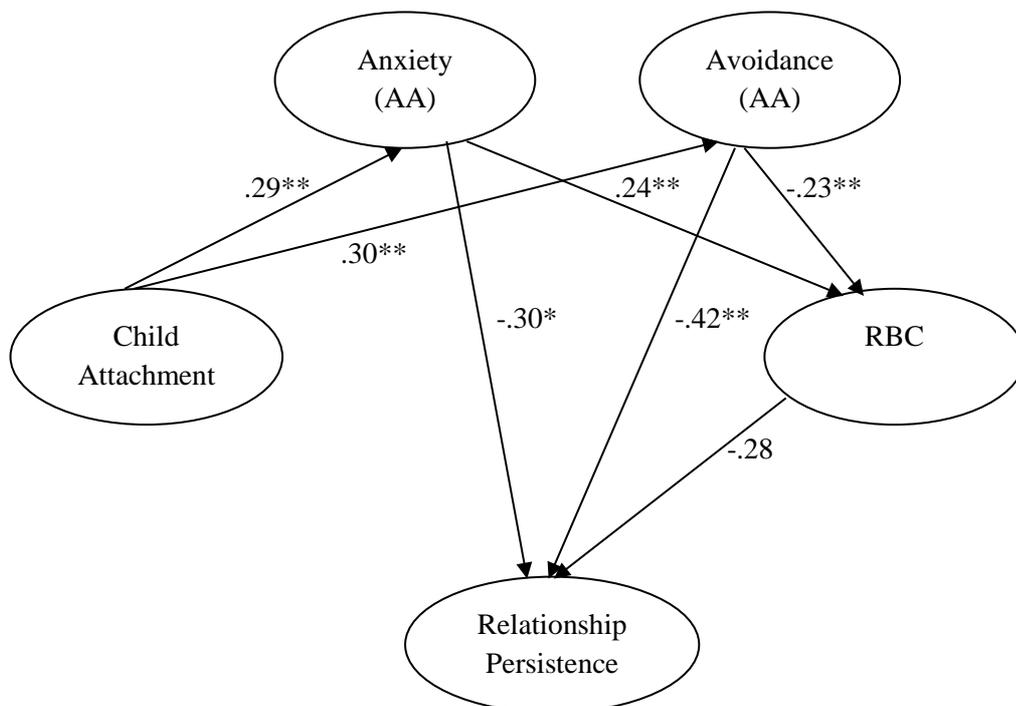
Figure 7. SEM results for the final integrated model. AA=adult attachment; RBC=relationship beliefs about change. *$p < .05$, ** $p < .01$. Fit indices were χ^2 (220) = 461.30, CFI = .91, IFI = .91, RMSEA = .06.

SEM results showed acceptable fit of the hypothesized model on the data, with χ^2 (220) = 461.30, CFI .91, IFI = .91, RMSEA = .06.The standardized coefficients of the pathways in the model are presented in Figure 7. All path coefficients were significant at *$p < .05$* except for the path from RBC to Relationship Persistence

(p=.127), for which there was a negative relationship (β = -.28) between the variables but which did not reach statistical significance. The model was tested with this path removed; however, there was only negligible change to the model fit. Hence, it is decided to keep the path in view of the meaningful conceptual contribution to the relationship between RBC and persistence.

The content of the three components of RBC also suggests the possibility of opposite or differential effects between "Managing Change" and the other two factors "Agent of Change" and "Inevitable Change", whereas individuals engage in an effort to change (i.e., MC) in order to deal with the perceived change or deterioration in their relationships (i.e., AGC and IC). In an attempt to explore this possibility, a simplified model was run with the three components from RBC and Relationship Persistence. The model run is shown in Figure 8.
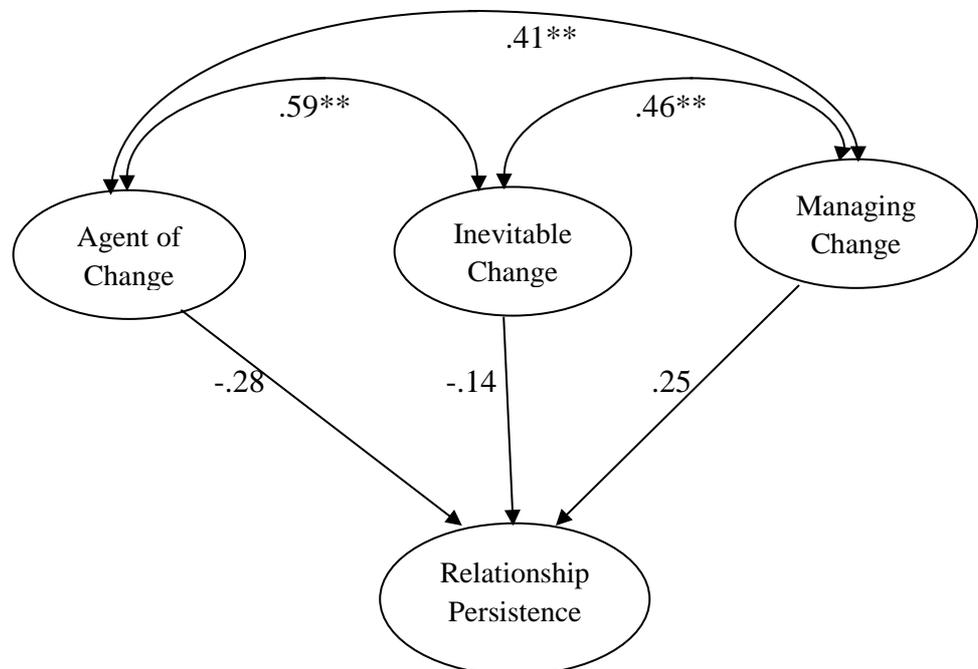
Figure 8. Exploring the differential effects of the three components of RBC on relationship persistence. *p <.05, ** p < .01. Fit indices were χ^2 (98) = 229.95, CFI = .81, IFI = .81, RMSEA = .07.

Both Agents of Change and Inevitable Change were negatively associated with Relationship Persistence, whereby Managing Change was positively associated with Relationship Persistence. This suggests that the overall negative relationship of RBC on Relationship Persistence might not fully reflect the dynamism of the paradoxical change beliefs and relationship persistence in Singaporean Chinese. It seems that Managing Change acts as a buffer to change beliefs, and might act in the opposite direction of the other two components. Perception and beliefs about change generally have a negative impact on individuals' tendency to persist with the relationships. However, looking into the individual dimensions of change-beliefs, it is this anticipation of changing social reality that energizes individuals to engage in proactive measures to maintain the relationship. Taken together, the three components reveals a belief-behavior dynamic based on realistic beliefs that relationship might change, and this apparently provides motivation for initiating maintenance and improvement in intimate relationships.

Overall the results suggests that early attachment experiences impact on adult attachment; more importantly, abstract relationship beliefs about change in Singapore Chinese is the result of adult attachment, whereby increasing anxiety and decreasing avoidance lead to an increasing endorsement of change-beliefs in intimate relationships. In addition, though the present study did not find support for an association between RBC and Relationship Persistence, the insignificant but negative association between RBC and Relationship Persistence might suggest that changeability in intimate relationships is likely to result in lower relationship persistence in times of conflict, and the dimension of Managing Change might have a counter-effect on the changeability beliefs inherent in intimate relationships. The

significance of both attachment and relationship beliefs about change in the model indicates that both attachment and relationship beliefs are important indicators of the survival of intimate relationships.

In sum, the RBC model includes a dimension that delineates the paradoxical nature of change beliefs, where effort of change is needed to maintain or improve the relationship, in order to protect the relationship from deteriorative changes that are expected to occur over time. The statistically non-significant path from RBC to relationship persistence might originate from differential effects of "Agent of Change" and "Inevitable Change", versus "Managing Change". However, these three dimensions are meaningfully intertwined and each is unlikely to stand alone. This reflects Singaporean Chinese attitudes towards relationships, whereby perceiving change as inevitable motivates proactive efforts in maintaining the relationships.

CHAPTER FIVE: GENERAL DISCUSSIONS

The first objective of the present study was to explore and understand the young adults' conception of close, intimate relationships in regard to changeability of the intimate relationships. This was achieved through qualitative interviews with Singaporean Chinese university students in Study 1. Secondly, we attempted to develop a measurement to capture this indigenous relationship belief and the expectation about change in intimate relationships. A total of 16 items were constructed from the recurring themes obtained from the semi-structured interviews in Study 1. The newly constructed scale was validated in Study 2 and demonstrated acceptable psychometric properties. Exploratory factor analysis was performed on Singaporean Chinese undergraduates, and three meaningful dimensions within the Relationship Beliefs about Change (RBC) questionnaire were found. They are "Agent of Change", "Inevitable Change", and "Managing Change", and this three-factor model was confirmed in CFA with a second dataset obtained from the same university with another group of Singapore Chinese students. The resulting questionnaire revealed that change beliefs in the local Chinese might be multi-faceted, which includes perceptions about who and what is responsible for changes in the relationship, believing in inevitable changes, and asserting effort to manage the change in order to maintain the relationship. Overall, the validation results showed support for this three-dimensional RBC scale as a measure of the construct of change beliefs in intimate relationships.

The Construct of Relationship Beliefs about Change

The RBC scale is constructed on the basis of lay people's conceptualization and expectations about changes in the romantic relationship. Its multidimensional

content is comprehensive in explaining individual's beliefs of relationship change covering agent of change, direction and inevitability of change, as well as managing change. As expected, the change beliefs and perceptions revealed in semi-structured interviews include both induced and natural changes. Examples of interview responses that revealed natural change include "…. because there are many things in life that will change, and these I think are out of your control….." indicating the changes that are beyond a person's power to control. On the other hand, interview responses towards whether relationship would change, also included instances that refer to induced change, such as "…if I don't make a change right, this [the relationship] would never go on. So I think I will make a change to make a better one…", This is consistent with Rogg and Bradbury's (2002) notion of differentiating induced change, or changes made by intentional effort, and natural change, or changes that occur without purposive intervention, and that both are essentially part of the dynamic of the changing reality.

Similarly, responses revealed in the qualitative interviews as wells as items across the three dimensions revealed in EFA and CFA demonstrated both natural and induced change as perceived in intimate relationships. For instance, in the dimension of Agent of Change revealed in EFA, items such as "Relationship change when I am at different phases of my life", and "Relationship change when it moves from stage to stage" depicted perception of relationship change as a form of natural process rather than deliberate effort. On the other hand, items in the dimension of Managing Change such as "Relationship change to keep the relationship from going downhill" implied effort is required to maintain or salvage ongoing relationships.

However, this is in contrast to past research on implicit beliefs about relationships, which focused mainly on effort of change, as seen in Dweck at al. (1995) study. Dweck et al. (1995) provided important insights to implicit beliefs about change in various human attributes; however, their concept of change focused on a single dimension of entity versus incremental beliefs on human attributes. They are mainly concerned about malleability – or more precisely, the ability to change. The present study obtained insights on young people's conceptions of potential changes in intimate relationships, which was found to include essentially both the possibility of induced change or malleability, and the natural changes that occur over time. In this way, the study extended the notion of change by identifying naturally occurring changes in addition to deliberate change in relationships.

This notion of change in romantic relationships perceived by the young adults in Singapore is unique in the first dimension of RBC, "Agent of Change", indicates the belief that the self, partner, environmental factors, relationship process and even natural growth or maturity of relationships are responsible for changes in intimate relationships. When any of these agents change, the relationship will change correspondingly. This highlighted the dynamics of relationships, the course of which is vulnerable to any changes that would be brought forth by these stated agents. It is apparent that not only the self and relationship partner are important factors in relationship beliefs about change, the contextual factors (e.g., "relationships change when environment or situations change") and natural process of development (e.g., "relationships change when I am at different phases of my life", "relationships change when it moves from stage to stage") that are often beyond the direct control of individuals, are also critical in the course of the relationship. The emphasis on external

factors is influenced by the cultural social niche in which the relationship occurs and develops. This is again consistent with Rogg and Bradbury's (2002) ideation of multifaceted change.

Singaporean Chinese are collectivistic like some East Asians, who are under the cultural influences of Confucianism and Buddhism (Ji et al., 2010). They are more likely than people from individualistic societies, to place emphasis on external forces in their social relationships (Leung, 1996). It is apparent from the RBC scale that both the couple and the circumstances are cited as the agents that initiate or contribute to changes in romantic relationships. Chan et al. (2010) reviewed that the role of contextual or external factors is what differentiated Chinese perspectives on relationships from their western counterparts. This was in line with results of the present study: items in the RBC scale such as "Relationship change when environment and situation change", explicitly demonstrated that the young adults conceptualized relationship change to include contextual factors that are essentially part of the natural process in a developing relationship. Similarly, in Chang and Chan's (2007) study, they obtained empirical support that circumstantial factors and opinions or inputs from the social network were deemed as important as intrapersonal or dyadic perspectives on relational decisions, such as whether it is the right time to get married. Apparently, young Chinese adults in Singapore value the needs and the perspectives of their significant others or their social community. This coincides with past study which found that interdependence with significant other has important consequences for allocentric individuals' psychological adjustment and health (Neo, 2004).

In a nut shell, the findings from this present study are consistent with the notion of multi-faceted change that includes both induced change and natural change

(Rogge & Bradbury, 2002) as reviewed earlier. Additionally, relationship researcher Berschied (2010) contended that intimate relationships are bound to change when the environment which nurtures the relationship changes with time. In this way, relationship changes are perceived to be inevitable and realistic, in that things might change for better or worse.

Therefore, changes in romantic relationships might occur when critical agents such as the self, the partner, environment, situation and relationship process are involved. Moreover, this perspective of change is essentially a realistic one as revealed in the second dimension of RBC "Inevitable Change", for instance, items such as "the longer the relationship, the more likely it will change", "relationships change as people are unpredictable" or "relationships change as change is the only constant in life". These items share the perceived uncertainty of the state and direction of the relationship in the future. They exude the underlying anxiety about the potential change in romantic relationships. Furthermore, items in the dimension of Managing Change like "Without progress, things will deteriorate eventually, so as relationships" implies a realistic attitude that at times, relationship can deteriorate and not necessarily always changing for the better. In other words, intimate relationships are bound to change and maybe even deteriorate if allowed to run their own course. This is different from past studies in which change beliefs were proposed to have predominantly positive implications on relationship outcomes, and change beliefs are often associated with the ability to make positive changes (e.g., Knee et al., 2003) or simply referred to as part of the growth and development of an individual's potential (e.g., Dweck's (1995) entity versus incremental beliefs; and Eidelson & Epstein's (1982) "Partner cannot change" dimension in "Relationship Belief Inventory"). However, the realistic

expectation about change, including the possible negativity of change embedded in relationship beliefs corresponds to past studies on stability and change in romantic or marital relationships that conceptualize changes in relationships mainly as unavoidable or sometimes deterioration (Vangelisti, Reis, Fitzpatrick, 2002). The present study participants hold a more realistic and wider view about relationship change whereby change can occur for the better or worse.

Nevertheless, this realistic outlook might become the motivating force for the Singaporean Chinese in dealing with possible changes in intimate relationships; this is evident in the "Managing Change" dimension of the RBC scale. This dimension of change beliefs hinges on the realistic outlook about the unavoidable and constantly changing reality of intimate relationships (see item 11 in Table 4), and perceives relationship change as a proactive effort to curb potential deterioration if any (see item 9 and 10 in Table 4) of the relationship. This seems to be consistent with the proposition that the Chinese hold beliefs about change as non-linear or perhaps cyclical (Ji et al., 2001; Ji et al., 2010) whereby change might initiate or indicate both progression and deterioration in relationships at different point of time or from different point of view. With this paradoxical view, the Chinese might expect more changes to come, whether in good times or bad. The Chinese have been found to be highly skeptical toward most events and inclined to anticipate change (Ji, Nisbett, & Su, 2001).This means that Chinese individuals expect change regardless of whether the present state is satisfactory or not. When things are going well, they anticipate potential deterioration; when things are not going well, they expect it to change for the better. In this way, the Chinese are often vigilant about the potential changes, and are

constantly making preparation for potential down turn of events (Chang & Sivam, 2004).

From the RBC scale, it is apparent that although young adults see changes in intimate relationships as inevitable and at times unpleasant or undesirable, they nevertheless, believe that proactive effort is needed to deal with the changes over time. For instance, one of the interviewed participant mentioned that maintaining relationship requires making effort to be in constant communication with the partner, and take time to do things together, rather than just let it be, like each do their own things after work daily. It is apparent that managing change requires one to be vigilant about their relationship current status quo, and know that things might not stay as it is forever, relationships are bound to change. Based on such understanding, individuals proactively invest effort to maintain or improve the relationships, such as taking the initiative to perform some activities together, deliberately spending time alone with the partner and so on. In other words, changes are needed to maintain relationships by proactively preventing undesirable change before it even happens. This deliberate intervention is by itself another form of change. It is this mindset that admonishes the relationship partners to be mindful to relationship changes and to stay vigilant during both good and bad times. Similarly, there are strong social norms in collectivistic societies for individuals to observe their obligations and roles in order to achieve harmony (Goodwin & Tang, 1996). However, this is not a passive observation but an earnest engagement in behaviors that would be helpful to the maintenance of relationships (King & Bond, 1985).

This paradoxical concept about relationship change implies that deliberate intervention is needed to manage changes that occur, whether intentional or natural

change. It seems that being vigilant and realistic about the relationship process can be a source of motivation for individuals to do something about it, rather than feeling hopeless about the changing future of the relationship while doing nothing about it. Taken together, change is deemed inevitable and yet this realistic perspective motivates individual to introduce changes to the relationship in order to prevent the relationship from changes that might or might not lead to deterioration; they actively engage in efforts to maintain the relationship before it takes the downward path. Hence, it seems that the three dimensions "Agent of Change", "Inevitable Change" and "Managing Change" essentially work hand-in-hand leading to an adaptive perspective and proactive attitude towards intimate relationships.

The Integrated Model: Attachment, Relationship Beliefs about Change, and Persistence in Relationships

The third aim of the study was to provide an integrative framework to explain relationship outcomes. In contemporary relationship research, the attachment theory and the models derived from the theories have been used to explain adult intimate relationships. We think that relationship beliefs about change, together with the attachment model, provide a more comprehensive and coherent explanatory framework of how mental representations of relationships function on the endurance of relationship in face of conflicts. A few hypotheses were generated from the hypothesized integrated model (Figure 4). Firstly, we expected the continuity of attachment from early childhood to adult years, and hence it was hypothesized that child attachment styles (i.e., CA) would positively predict adult attachment styles (i.e., AA). This hypothesis was supported with results showing Child Attachment

significantly predicted Adult Attachment represented by the latent variables of Anxiety and Avoidance in the model.

The present study utilized individuals' retrospective recollections of their earliest attachment experience recalled as an approximate measure for child attachment. The earliest mean age recalled in the present sample was found to be 5.59 years old. The significant path of Child Attachment to Adult Attachment is consistent with researchers who found associations between childhood and adolescence attachment representations but did not find any associations between infant and adolescence attachment representations (Lewis et al., 2000; Zimmerman et al., 1997). Although the continuity of attachment has obtained mixed findings in past research, the present study provides support for Bowlby's (1988) proposal that attachment representations are enduring constructs, and that any disruption in the continuity of attachment representations are probably the results of drastic changes in the care giving environment (Waters, Hamilton, & Weinfield, 2000). Recent research has found that the association between early attachment and relationship quality could still be found even after controlling for the present status of the relationship (Holland & Roisman, 2010). In other words, the continuity of attachment representation is unlikely to be transient artifact nor a biased perception based on the experiences of the current relationship.

Secondly, the study attempted to relate adult attachment to relationship change beliefs in predicting persistence in relationships. Attachment representations are mainly concerned about the self and other representations, while RBC focused on the representation of the relationship as a unit of analysis. It is hence hypothesized that adult attachment would contribute to the RBC, whereas both attachment and RBC

have direct effects on relationship persistence. This is partially supported when the SEM model exhibited acceptable fit; however, the direct path from RBC to relationship persistence was not significant.

It is noticed that the Anxiety dimension of Adult Attachment contributed positively to RBC, while Avoidance of Adult Attachment negatively predicted RBC. We have demonstrated earlier in Study 1 and 2 that inherent to the construct of relationship change is the anticipation of inevitable and natural change that might or might not lead to deterioration, and it is therefore probable that such realistic cognition has its roots in the insecure attachment. Holmes (2002) contended that avoidance attachment involves more general and negative expectations that might have more pervasive and detrimental effects than anxious attachment. These individuals are highly sensitive to situations that require interdependence among partners and they make earnest efforts to avoid them. Hence, people with high attachment avoidance would not have the opportunity to deal with the problems in the relationship at all. Additionally, correlational results in Table 5 (Study 2) and Table 8 (Study 3) have shown that the three dimensions of RBC are positively correlated. The higher the change is anticipated (i.e., Agent of Change and Inevitable Change), the more likely one would engage in Managing change. Since the RBC involves proactive efforts to curb changes along with the expectation of changes, the more anxiously attached an individual is, the more likely he or she would be to endorse the RBC. In other words, higher Anxiety attachment lead to higher endorsement of change beliefs, and the change beliefs (though found to be insignificant in the current study) revealed to have positive effects on the Relationship Persistence via Managing Change as revealed in the exploratory study in Figure 8. In this way, anxiety attachment might have indirect

benefits regarding relationship persistency, though this would require further research to clarify the relationships between anxiety attachment and individual components of relationships beliefs about change. On the contrary, avoidance attachment would impede the individual's effort to manage the potential change perceived, resulting in negative association with the RBC.

Indeed, researchers had long suspected that insecure attachment might not necessarily be associated with negative outcomes but instead might be adaptive depending on the social cultural context (Ein-Dor, Mikulincer, Doron, & Shaver, 2010). Though the direct path from RBC to relationship persistence did not reach statistical significance, exploratory analysis of the three dimensions of RBC separately on Relationship Persistence showed that the direction of the effect was the same as hypothesized (i.e., believing change as inevitable would negatively predict persistence in relationships, while viewing change as a necessary effort to maintain relationships would positively predict persistence). In this way it seems that although insecure attachment might have direct detrimental effects on relationship persistence, it might have beneficial effects through the dimension of "Managing Change" in RBC. It is also noted that the In other words, the uncertainty and anxiety experienced in the attachment relationships were re-energized into proactive efforts to persist in working on the relationship as indicated in the "Managing Change" dimension of RBC. Another possibility is that the null effect of RBC on relationship persistence might imply that having cognitive beliefs about relationship change do not have direct impact on relationship persistence. These underlying beliefs might only produce effects through other mediating or moderating variables, such as quality of relationship, length of relationship, conflict severity, personality and temperament of

the individuals. Further research on the probable mediating or moderating variables would help to clarify the null effect of RBC on relationship persistence. It is also probable that the participants in the present study, who still have a long way before reaching the age of marriage, might not be concerned about keeping or persisting in a relationship, even though they might believe that effort is needed to maintain the ever-changing relationships. Hence, the null effect of relationship beliefs about change on persistency is simply demonstrating that relationship beliefs has no effect on whether one would persist in a troubled relationship at this point of time in life. Future research is warranted to clarify the probable differences on the effects of beliefs about relationship change between dating couples and committed married couples.

The null relationships obtained in the SEM between the overall RBC and Relationship Persistence might also stem from the differential effects of the three dimensions of RBC. Reviewing the content of the dimensions, together with the exploratory analysis on the separate dimensions of RBC, shed some light on the non-significant findings, such as that perceiving inevitability of change (as in AGC and IC) and management of change (i.e., MC) are likely to have opposing direct effects on relationship persistence.

Chinese relationships are characterized by high interdependence and probably heightened anxiety, and some researchers have suggested that the normative attachment style in the Chinese cultural context might be anxious attachment (Chan et al., 2010). It is imperative in the Chinese cultural context for individuals to stay alert and mindful about relationships; the self is expected to make adjustment to accommodate the collective in order to maintain harmonious relationships (Chan et al., 2010). Norem and Chang (2002) contended that, similar to other cognitive beliefs

operationalized in Western research, the question whether optimism or pessimism is beneficial or detrimental (to individuals) is dependent on the prevailing values of its cultural community. The endorsement of Chinese values has been found to be positively associated with the concept of defensive pessimism, whereby expecting the worst motivates the individual to prepare for it, and in turn, reduces the probability of failure (Chang & Sivam, 2004). In a similar manner, the realistic outlook about the inevitability of changes in relationships can become the motivational force for individuals to take proactive efforts in dealing with the potentiality of change and at times even deterioration in the relationship. The three dimensions of RBC are therefore essentially interconnected and work together to provide adaptive advantages that aid the persistence of intimate relationship over time. Without the heightened uncertainty and insecurity which "Agent of Change" and "Inevitable Change" bring about, the reflective and adaptive thinking of "Managing Change" might not exist in the RBC of Singaporean Chinese. In other words, "Inevitable Change" is the underlying motivation, whereby changes are delivered via the various agents (including the self, the partner, growth process, environmental change etc.), and this produces proactive management of change in the individuals.

Further implications and limitations

Nevertheless, it is noted that there may be different ways of defining the meaning of the three dimensions obtained from the EFA results, especially the factor of Managing Change. There are only three items in this factor, hence it is probable to use other labels in summarizing the meaning of this factor, such as "Positive Appraisal of Change". Different labels given in defining the factor might produce non-trivial changes in the interpretation of the results. Hence it would be helpful for future

research to confirm the most appropriate way to define the factor, for instance, asking participants to choose from a series of labels that most represent the meaning of the three items.

Additionally, the three dimensions of RBC could be interpreted in different fashion and subsequently structured differently when incorporating it into the integrated model of attachment, relationship beliefs and persistence. Instead of understanding the RBC as three inseparable components that worked hand-in-hand, they might be taken separately as individual factors influencing the relationship behaviors independently. This could be performed by running the RBC as first-order model, separating each of the dimension in the integrated model. Alternatively, it could be explained as stages of change perceived. The initial perception that change is brought on by certain agents, for instance, changes in the partner or environmental changes (i.e. Agent of Change), which would eventually lead one to believe that change is unavoidable (i.e. Inevitable Change). This might later develop into the belief that intentional effort is required to curb the imminent change perceived (i.e., Managing Change). Under this process perspective, the three components occur in stages. Hence, the integrated model would have three separate components of RBC, whereby additional pathway from Agent of Change to Inevitable Change, and from Inevitable Change to Managing Change, could be added to the model when running the SEM analysis. Since the exploratory model in the present thesis (Figure 8) has found differential effects of the three components on Persistence, it would be informative to further explore alternate way of conceptualizing and interpreting the RBC within the integrated model.

The present study clarifies the continuity of attachment styles from childhood to adulthood, and casts anxiety and attachment in a new light by taking into consideration the cultural context. Preventive thinking and other realistic cognitions about probable change might not have negative connotations on the individual in collective cultures that value earnest observation of their roles and obligations toward their significant other. In these cultures, anticipating change or even failure has motivating effects to goad individuals to approach the problems and engage in maintenance strategies to salvage their romantic relationships. This further implicates on developing culturally appropriate psychological intervention for relationship issues. Instead of reprimanding individuals who harbor expectations about the likelihood of change or deterioration in relationships, professional helpers might consider helping the couples make use of this uncertainty in intimate relationships as a means to obtain control by approaching and preparing for the anticipated negative outcomes. Since increasing interdependence in intimate relationships heightened the likelihood of experiencing uncertainty and anxiety in the relationship (Fitness, 2006), this might become an asset rather than liability in Chinese intimate relationships if proper guidance is given during intervention.

The present study has several limitations that require careful consideration in interpretation and generalization of the results. Firstly, relationship is essentially a dyadic activity. Though the present study offered some insights to the dyadic-level representations of relationships in RBC, it is still an individual's cognitive representation. It is highly likely that, in intimate relationships, each partner's beliefs influence the other's as well as each other's outcome, especially in Chinese culture that promotes high interdependence and place emphasis on the collective. Hence,

future research on the within or intra-dyad dynamic would be important to understanding how relationship cognitions affect behaviors. Furthermore, as the present thesis is a within-culture study, hence no direct comparison has been made on change beliefs between the local participants and participants in other cultural context. Future cross-cultural studies, especially in comparison to individualistic cultures would be beneficial in further exploring young adults' relationship beliefs about change.

Holmes (2002) suggested that it might depend on the current state and health of the relationship as to whether individuals would harness their uncertainty beliefs and anxiety in relationships and utilize it as form of motivation to care for the relationship. Different outcomes might arise from relationships that are generally satisfying and relationships that are already in a rocky or fragile state. Holmes contended that relationships that have had breached trust might not demonstrate improvement despite perceiving uncertainty and anxiety. Further studies might benefit from understanding the current status of the relationship dynamic and relationship health before assessing their attachment tendencies and change beliefs.

Further limitations might be the use of retrospective reports to capture participants' childhood attachment patterns, which relied on the reliability of long-term memory. Possible decay of memory over time, as well as the effect of current moods on the recall of events were likely yet difficult to quantify (Feeney & Noller, 1996). The study would benefit from the future inclusion of corroborative data from the family members or follow-up with longitudinal study to further clarify the relationship among the childhood and adult variables if resources are available.

Conclusion

The present study has presented a new construct of RBC that might be indigenous to Asian Chinese. Relationships change is believed to be inevitable but change could be managed by interventional effort to maintain the relationship. This seemingly paradoxical belief of introducing change to curb potential change, might have its roots in traditional Chinese culture that remains to influence the young adults. Anxiety and uncertainty might be normative in such cultures and might have beneficial effects as they align with the cultural values and expectations. Specifically, the higher the endorsement of the necessity and inevitability of change, the higher the likelihood of proactive management of change. It is also noted that attachment anxiety and avoidance contributed positively and negatively to change beliefs in relationship respectively, indicating the underlying dynamic of change beliefs whereby uncertainty about the relationships might provide motivation in the maintenance of relationship within the RBC. Results from the main study have demonstrated the complexity of relationship cognitions, whereby attachment and change beliefs are associated in producing relationship outcomes, suggesting how relationship-level representations might complement attachment representations that focus more extensively on the individuals in the relationship, (i.e., the self and the partner) than on the relationship itself. Future research is proposed to clarify the within-dyadic influences of attachment and change beliefs.

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APPENDICES

Appendix A: Questionnaires in Study Two

A1. Relationship beliefs about change (RBC)

Instructions: The following statements pertain to your beliefs and expectations about emotionally intimate relationship (with the opposite gender) in general, not only the beliefs you have for the current relationship you're engaged in.

Strongly Disagree …………………………………………………..Strongly Agree
1………… 2 ………… 3 ………… 4 ………… 5 ………… 6 ………… 7

1.	Relationships change when I change.
2.	Relationships change when environment or situations change.
3.	Relationships change as growth (inevitable part of the process of growing).
4.	Relationships change when I'm at different phases of my life.
5.	Relationships change when my partner changes.
6.	Relationships change as people are unpredictable.
7.	Relationships change as change is the only constant in life.
8.	Relationships change as relationship has different stages.
9.	Relationships change as a mean to compromise and work things out.
10.	Relationships change to "preserve" the relationship from going downhill.
11.	Without progress, things will deteriorate eventually, so as relationships.
12.	The longer the relationship, the more likely it will change.
13.	Relationships change because people like to experience the highs and lows in relationship, as the spices of life.
14.	Relationships change when my perception of my partner changes after being in the relationship for some time.
15.	Relationships change when the relationship is not what I expected.
16.	Relationship change when we change together as a couple.

A2. Experience in close relationships-revised (ECR-R) (Fraley, Waller, & Brennan, 2000).

Instructions: The statements below concern how you feel in emotionally intimate relationships. We are interested in how you *generally* experience intimate relationships, not just in what is happening in a current relationship. Respond to each statement by circling a number to indicate how much you agree or disagree with the statement.

Strongly Disagree ……………………………………………Strongly Agree
1………… 2 ………… 3 ………… 4 ………… 5 ………… 6 ………… 7

1.	I'm afraid that I will lose my partner's love.
2.	My partner really understands me and my needs.
3.	I often worry that my partner will not want to stay with me.
4.	It's easy for me to be affectionate with my partner.
5.	I often worry that my partner doesn't really love me.
6.	I find it easy to depend on my romantic partner.
7.	I worry that my romantic partner won't care about me as much as I care about him/her.
8.	I feel comfortable depending on my romantic partner.
9.	I often wish that my partner's feelings for me were as strong as my feelings for him or her.
10.	I am nervous when my partner gets too close to me.
11.	I worry a lot about my relationships.
12.	I talk things over with my partner.
13.	When my partner is out of sight, I worry that he or she might become interested in someone else.
14.	I tell my partner just about everything.
15.	When I show my feelings for my romantic partner, I'm afraid that they will not feel the same about me.
16.	It helps to turn to my romantic partner in times of need.

17.	I rarely worry about my partner leaving me.
18.	I usually discuss my problems and concerns with my partner.
19.	My romantic partner makes me doubt myself.
20.	It's not difficult for me to get close to my partner.
21.	I do not often worry about being abandoned.
22.	I find it relatively easy to get close to my partner.
23.	I find that my partner don't want to get as close as I would like to be.
24.	I get uncomfortable when my romantic partner wants to be very close.
25.	Sometimes my romantic partner changes his/her feelings about me for no apparent reason.
26.	I prefer not to be too close to my romantic partner.
27.	My desire to be very close sometimes scares people away.
28.	I don't feel comfortable opening up to my romantic partner.
29.	I'm afraid that once my romantic partner gets to know me, he or she won't like who I really am.
30.	I am very comfortable being close to my romantic partner.
31.	It makes me mad that I don't get the affection and support I need from my partner.
32.	I find it difficult to allow myself to depend on my romantic partner.
33.	I worry that I won't measure up to other people.
34.	I feel comfortable sharing my private thoughts and feelings with my partner.
35.	My partner only seems to notice me when I'm angry.
36.	I prefer not to show a partner how I feel deep down.

A3. Implicit theories of intelligence (IBI) (Dweck, Chiu & Hong, 1995)

Instructions: Please indicate your agreement with the following statements by circling the number according to the scale below.

Strongly Disagree ………………………………………………Strongly Agree
1………… 2 ………… 3 ………… 4 ………… 5 ………… 6 ………… 7

1.	You have a certain amount of intelligence and you really can't do much to change it.
2.	Your intelligence is something about you that you can't change very much.
3.	You can learn new things but you can't really change your basic intelligence.

A4. Implicit theories of relationships (ITR) (Knee, Patrick, & Lonsbary, 2003)

Instructions: The following items regard beliefs and about relationship. For each item, please circle the number that best reflects the extent to which you agree or disagree, using the scale below from 1 to 7.

Strongly Disagree ….………………………………………………..**Strongly Agree**

1….……… 2 …….…… 3 ….….…… 4 ….….…… 5 ….….…… 6 …….…… 7

1.	Potential relationship partners are either compatible or they are not.
2.	The ideal relationship develops gradually over time.
3.	A successful relationship is mostly a matter of finding a compatible partner right from the start.
4.	A successful relationship evolves through hard work and resolution of incompatibilities.
5.	Potential relationship partners are either destined to get along or they are not.
6.	A successful relationship is mostly a matter of learning to resolve conflicts with a partner.
7.	Relationships that do not start off well inevitably fail.
8.	Challenges and obstacles in a relationship can make love even stronger.
9.	If a potential relationship is not meant to be, it will become apparent very soon.
10.	Problems in a relationship can bring partners closer together.
11.	The success of a potential relationship is destined from the very beginning.
12.	Relationships often fail because people do not try hard enough.
13.	In order to last, a relationship must seem right from the start.
14.	With enough effort, almost any relationship can work.
15.	A relationship that does not get off to a perfect start will never work.
16.	It takes a lot of time and effort to cultivate a good relationship.
17.	Struggles at the beginning of a relationship are a sure sign that the relationship will fail.
18.	Without conflict from time to time, relationships cannot improve.

19.	Unsuccessful relationships were never meant to be.
20.	Arguments often enable a relationship to improve.
21.	Early troubles in a relationship signify a poor match between partners.
22.	Successful relationships require regular maintenance.

A5. Relationship beliefs inventory (RBI) (adapted from Eidelson, & Epstein, 1982)

Instructions: The statements below describe ways in which a person might feel about a relationship with another person. Please rate each statement according to how strongly you believe that it is true or false for you, and circle the number that best reflects you, using the scale below from 1 to 7.

Disbelieve Strongly …………………………………………… Believe Strongly
1………… 2 ………… 3 ………… 4 ………… 5 ………… 6 ………… 7

1.	If your partner expresses disagreement with your ideas, he/she probably does not think highly of you.
3.	Damages done early in a relationship probably cannot be reversed.
4.	I cannot accept it when my partner disagrees with me.
6.	My partner does not seem capable of behaving other than he/she does now.
7.	I take it a personal insult when my partner disagrees with an important idea of mine.
9.	A partner can learn to become more responsive to his/her partner's needs.
10.	I like it when my partner present views different from mine.
12.	Just because my partner has acted in ways that upset me does not mean that he/she will do so in the future.
13.	I get very upset when my partner and I cannot see things the same way.
15.	A partner who hurts you badly once probably will hurt you again.
16.	I cannot tolerate it when my partner argues with me.
18.	If my partner wants to change, I believe that he/she can do it.
19.	When my partner and I disagree, I feel like our relationship is falling apart.
21.	If you don't like the way a relationship is going, you can make it better.
22.	I do not doubt my partner's feelings for me when we argue.
24.	I do not expect my partner to be able to change.

A6. Relationship assessment scale (RAS) (Hendrick, 1988)

Instructions: The statements below concern how you feel about in emotionally intimate relationships. Please rate each statement by circling the number to indicate how much you agree or disagree with the statement.

Strongly Disagree……………………………………………………. Strongly Agree

1………… 2 ………… 3 ………… 4 ………… 5 ………… 6 ………… 7

1.	How well does your partner meet your needs?
2.	In general, how satisfied are you with your relationship?
3.	How good is your relationship compared to most?
4.	How often do you wish you hadn't gotten into this relationship?
5.	To what extent has your relationship met your original expectations?
6.	How much do you love your partner?
7.	How many problems are there in your relationships?

Appendix B: Questionnaires in Study Three

B1. Relationship beliefs about change (revised) (RBC)

Instructions: The following statements pertain to your **beliefs and expectations** about emotionally intimate relationship **in general**, not only the beliefs you have for the current relationship you're engaged in.

Strongly Disagree …………………………………………………..Strongly Agree

1………… 2 ………… 3 ………… 4 ………… 5 ………… 6 ………… 7

2	Relationships change when I change.
3.	Relationships change when environment or situations change.
4.	Relationships change as growth (inevitable part of the process of growing).
5.	Relationships change when I'm at different phases of my life.
6.	Relationships change when my partner changes.
7.	Relationships change as people are unpredictable.
8.	Relationships change as change is the only constant in life.
9.	Relationships change as relationship has different stages.
10.	Relationships change as a mean to compromise and work things out.
11.	Relationships change to "preserve" the relationship from going downhill.
12.	Without progress, things will deteriorate eventually, so as relationships.
13.	The longer the relationship, the more likely it will change.
14.	Relationships change because people like to experience the high and low in relationship.
15.	Relationships change when my perception of my partner changes.

B2. Child attachment.

Part A. Please recall the time when you were a baby or toddler (as early as you can remember), How old were you then**?**

_____ **yrs old**

Who was your **main caregiver** at that period of time (i.e., the person who took care of you most of the time)? Please write in the box below. If you have more than one caregiver, please write them down in sequence of their importance.

1._____

2. (if any)   _____

3. (if any)   _____

Part B. Please take a moment to recall **a specific incident of separation** with this main caregiver during your early childhood (**as early as possible**) that had caused some anxiety during the separation. (e.g., first day in nursery school, caregiver went to work and leave you under someone else care, caregiver attend to your siblings instead of you, lost in mall etc).

Please indicate your age when this incident happened:

_____ **yrs old**

Please answer all the following questions according to **your actual behavior during that separation**. The "caregiver" in the questions refers to your **main caregiver only**.

Part C. **When reunited** with the caregiver after the separation, how well do the following statements describe **your immediate reaction** at that time, please circle the number that best indicate your reactions, according to the scale below:

Not at all like me…………………………………………………. Very much like me

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

1.	Could not be bothered, showed no interest.
2.	Approached the caregiver, relieved and happily interact with or embraced him/her.
3.	Cried and takes quite a while to be calmed.
4.	Angry, protested to the caregiver for leaving you.
5.	Held on or stay close to the caregiver to prevent him/her from leaving you again.
6.	Avoid the caregiver, do not want to get close to or talk to him/her for the moment.
7.	Happy, Initiated contact with caregiver and continued with your prior activity.
8.	Attempt to hit the caregiver, or resisted his/her affectionate gesture (e.g., push him/her away).

B3. Relationship persistence

Below are **common conflicts** couples have in their everyday life. Imagine if you're in such a conflict, rate the frequency of having these conflicts in your relationships according to a 7 point-scale, and circle your answer regarding whether you have thought of giving up the relationship during the conflicts.

Conflict 1:   Unhappy about my partner getting close to or goes out with another opposite-sexed friend.

Least Frequent ..……………………………………………… Very Frequent						
1	2	3	4	5	6	7

Did you ever think of giving up the relationships during this conflict?   (Please circle your answer).

Yes   /   No

****

Conflict 2:   I want my partner to spend more time with me but he/she refuses.

Least Frequent ..……………………………………………… Very Frequent						
1	2	3	4	5	6	7

Did you ever think of giving up the relationships during this conflict?   (Please circle your answer).

Yes   /   No

****

Conflict 3:   My partner did not reciprocate the same amount of care and concern that I gave him/her.

Least Frequent ..……………………………………………… Very Frequent

1	2	3	4	5	6	7

Did you ever think of giving up the relationships during this conflict?   (Please circle your answer).

Yes   /   No

****

Conflict 4:   I expect my partner to disclose more about himself/herself than he/she would.

Least Frequent ..……………………………………………… Very Frequent

1	2	3	4	5	6	7

Did you ever think of giving up the relationships during this conflict?   (Please circle your answer).

Yes   /   No

****

Other common and important conflicts in your relationship not listed above, please specify in the empty box below:

Least Frequent ..……………………………………………… Very Frequent

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Did you ever think of giving up the relationships during this conflict?   (Please circle your answer).

Yes   /   No

Appendix C: Testing for 2nd Order RBC

Relationship Beliefs about Change (RBC) and Adult Attachment (AA) were tested for the presence of higher-order. Comparisons among three different models were made, this included: (a) both RBC and AA as first-order model (see Figure C1), (b) first-order AA model with second-order RBC model (see Figure C2), and lastly (c). both RBC and AA in second-order model (see Figure C3). Results supported the utilization of RBC as second-order model while Adult Attachment as first-order model (i.e., model in C2), as the comparisons demonstrated the chi-square values and fit statistics are comparable to model C3, yet more parsimonious than C1.
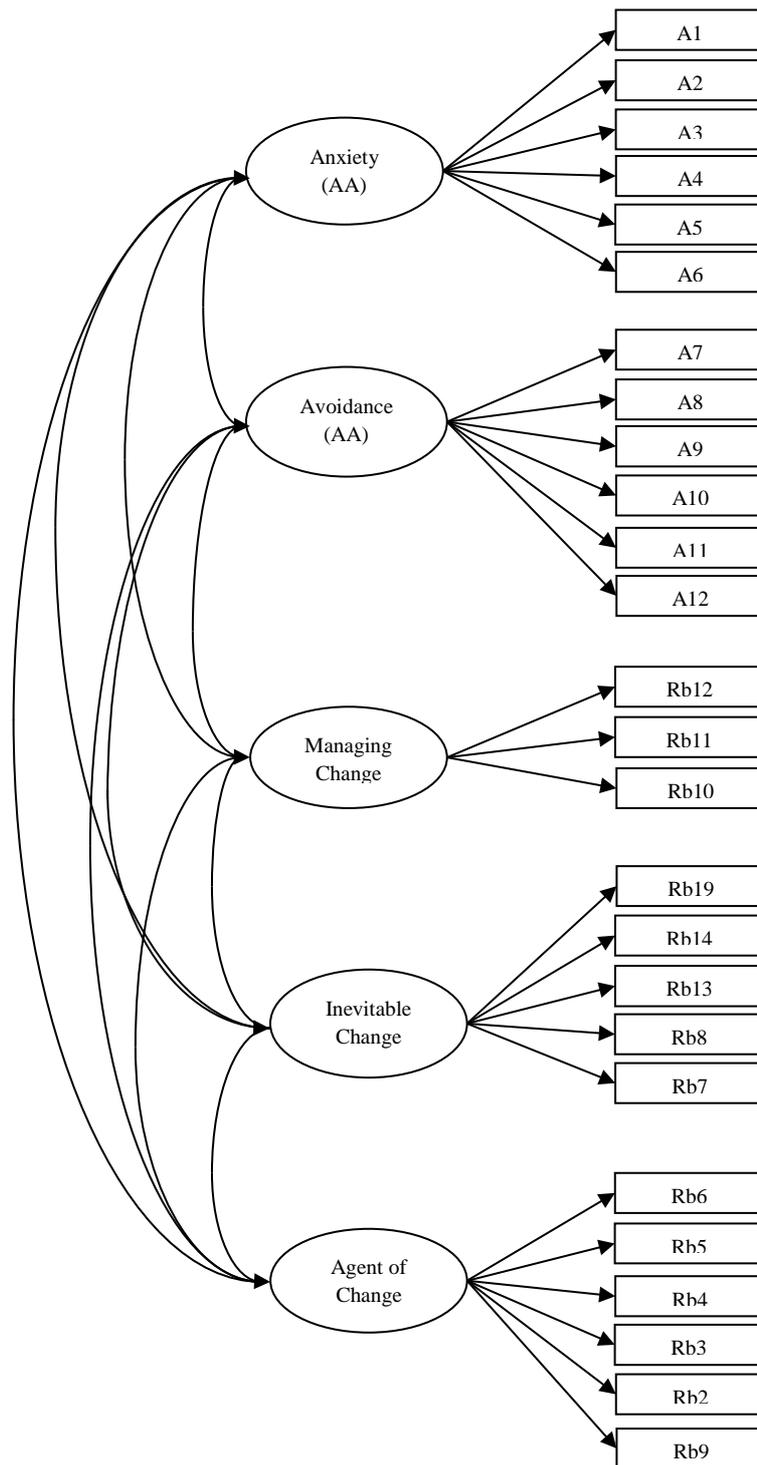
Figure C1. First order model being tested for both relationship beliefs about change and adult attachment. Results= χ2 (263) = 481.68, GFI = .89, CFI = .92, IFI = .92, RMSEA = .05. AA=adult attachment; RBC=relationship beliefs about change.
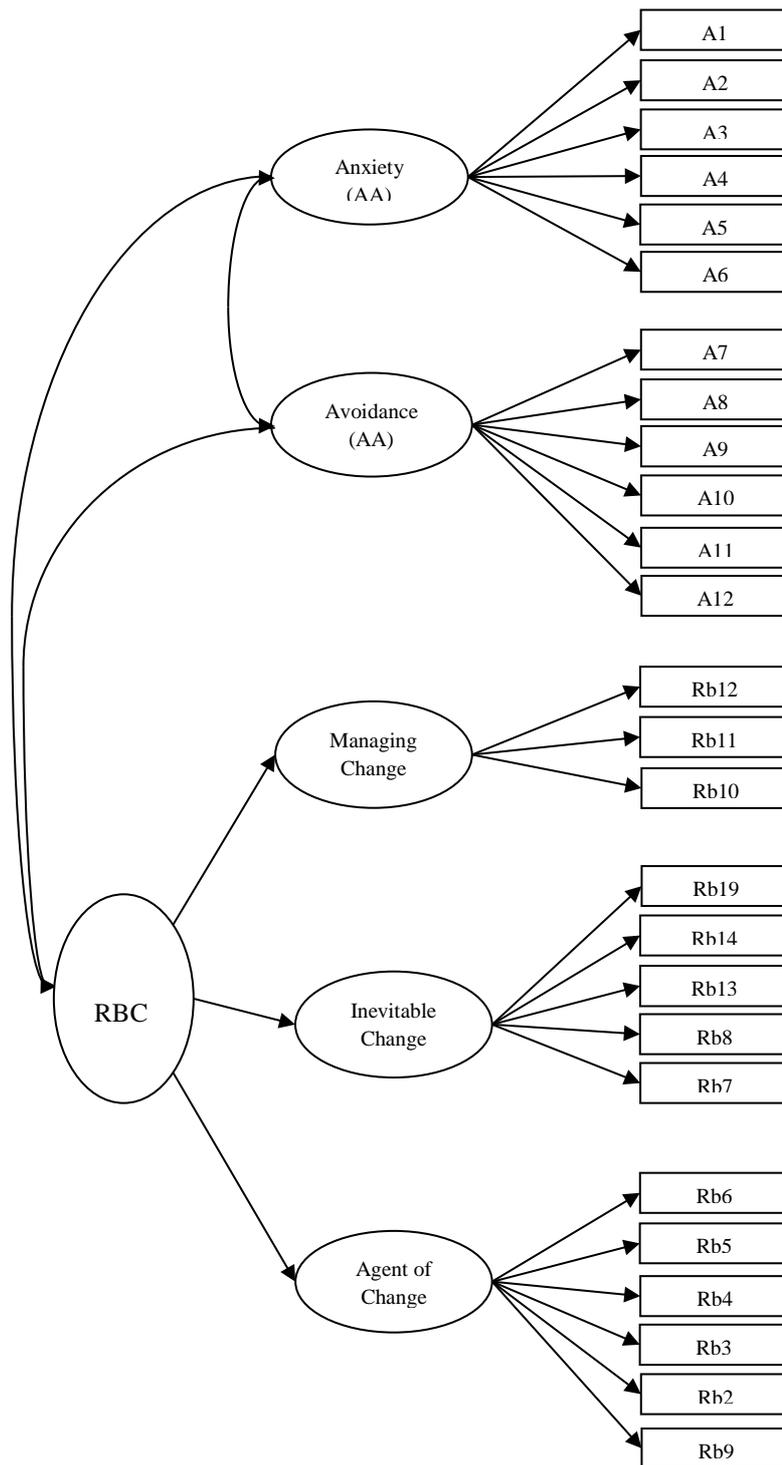
Figure C2. Second-order model of Relationship beliefs about change and first-order of Adult Attachment being tested, results showed $\chi2$ (267) = 501.04, GFI = .89, CFI = .91, IFI = .91, RMSEA = .05. RBC=relationship beliefs about change; AA=adult attachment.
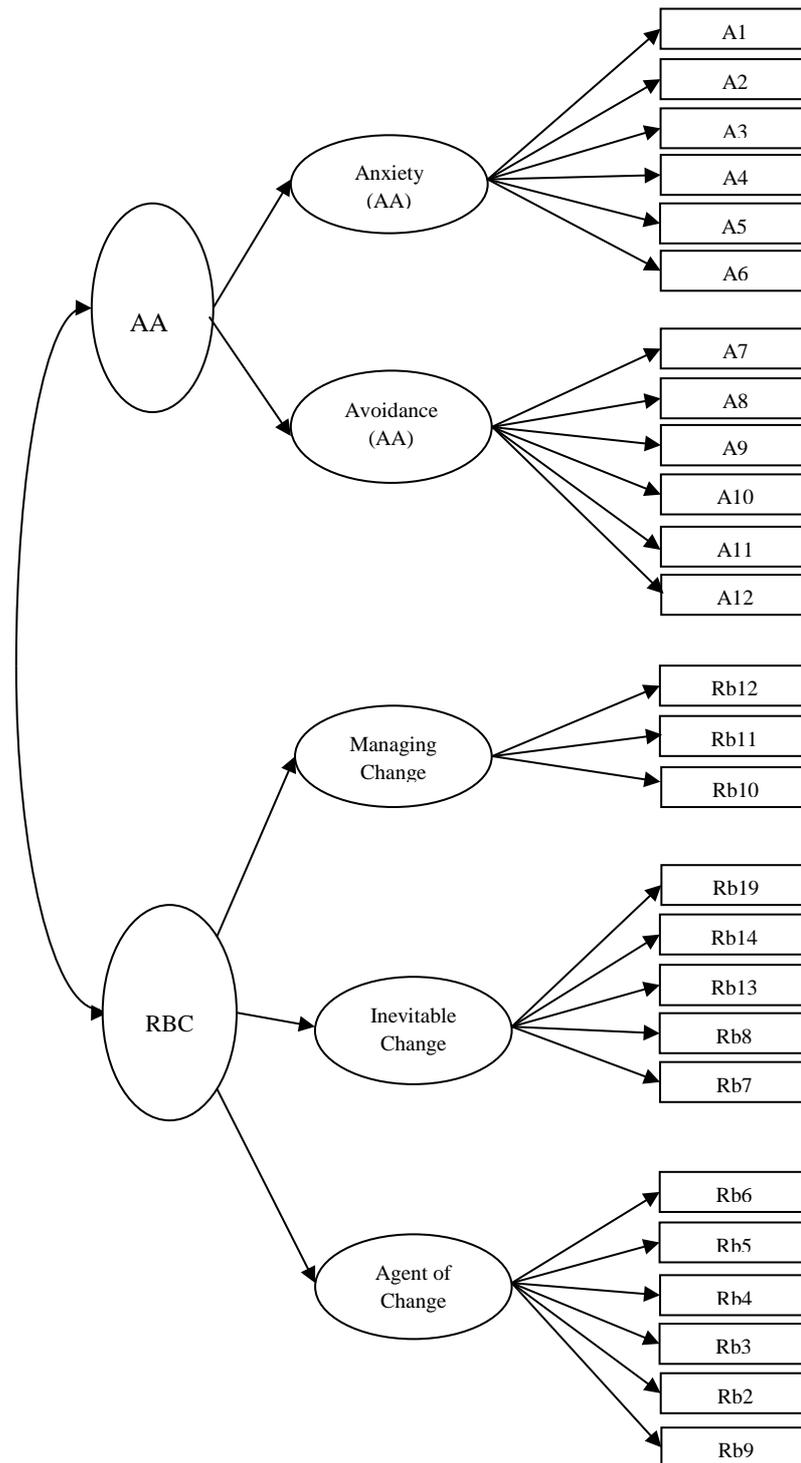
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Figure C3. Second-order model of both Relationship beliefs about change and
Adult Attachment were tested. Results showed $\chi2$ (425) = 754.11, GFI = .86,
CFI = .90, IFI = .90, RMSEA = .05. RBC=relationship beliefs about change;
AA=adult attachment.