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Where do all the cooties go?: How maternal repartnering characteristics impact children's  
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Where Do All The Cooties Go?: How Maternal Repartnering Characteristics Impact  
Children's Romantic Interest And Involvement

by

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Where Do All The Cooties Go?: How Maternal Repartnering Characteristics Impact  
Children's Romantic Interest And Involvement

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This project explores the link between exposure to family instability through maternal repartnering and the development of romantic interest and involvement during childhood and preadolescence. Family instability has long reaching consequences, especially for children's well being. Exposure to family instability spills over into children's own lives, implying parents and children's lives are inextricably linked. The actions, experiences, and choices of parents have a direct and measurable impact on children's lives, as evidenced by links between parents' marital lives and their offspring's romantic involvement during adolescence and adulthood.

The goal of this project is twofold. First, I build on this literature to explore how maternal repartnering impacts children's romantic interest and involvement. Through various mechanisms such as increased awareness of romance or searching for a substitute in response to maternal repartnering, I expect children's romantic interest and

involvement will be associated with maternal repartnering behaviors and attitudes. The second goal of this project explores this association among a sample of children and preadolescents, examining this link during an earlier period in the life course than existing literature. This includes an in depth examination of the characteristics and developmental trajectories of romantic interest and involvement beginning at age five and extending to age 13.

Results suggest that romantic interest and involvement emerges during childhood and is associated with both individual and family level characteristics. As children mature, they report substantially greater levels of romantic involvement with each passing year. Changes in romantic involvement correspond to greater social and pubertal development. Children's reports of romantic interest did not show developmental change but were relatively stable over time.

There were no consistent effects of maternal repartnering on children's romantic involvement. Children's romantic interest was linked with maternal repartnering attitudes however. Higher levels of maternal focus on repartnering were associated with greater romantic interest among children, suggesting that maternal repartnering does impact children's romantic trajectories.

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## CHAPTER 1: INTRODUCTION & THEORETICAL BACKGROUND

### Introduction

Painting a picture of American family life has become increasingly complex during the past several decades. Currently, fewer than half of all American children live with two biological married parents until they reach 18 (Bumpass & Lu, 2000; Teachman, 2003). Both children and adults increasingly live outside of continuously married families and are exposed to family instability. Family instability includes transitions between living with single, married, and divorced parents. Alternative family transitions such as parental dating, sleep overs, and cohabitation have also become more common (Anderson & Greene, 2005; Anderson et al., 2004; Brown, 2004; Bumpass & Raley, 1995; Bumpass, Raley, & Sweet, 1995).

Exposure to family instability remains one of the most salient experiences for children. Decades of research have illustrated the consequences of family instability for children's well being across the life course (Amato & Keith, 1991; Cherlin et al., 1991; Wallerstein, 1991). As much as adults struggle through marital transitions (Amato, 2000; Hines, 1997; Zill, Morrison, & Coiro, 1993), children face similar hurdles in recovering from and adapting to these transitions.

Exposure to family instability spills over into children's own lives, implying parents and children's lives are inextricably linked (Elder, 1994, 1998). The actions, experiences, and choices of parents have a direct and measurable impact on many aspects of children's lives. This is particularly true when studying links between parents' marital

transitions and children's trajectories of romantic and sexual involvement across the life course (Cavanagh & Sullivan, 2009). Exposure to family instability is associated with children's marriage patterns during young adulthood (Amato & Booth, 2001) and their romantic involvement during adolescence (Cavanagh, Crissey, & Raley, 2008; Sullivan & Raley, 2008).

My goal is to contribute to this literature by addressing two gaps in the research. First, I expand the definition of family instability by focusing on both informal transitions, such as maternal dating and sleep overs, and formal transitions, such as cohabitation and remarriage, following a divorce. There is evidence that these informal repartnering transitions are difficult to capture but may represent important instability within children's lives (Anderson & Greene, 2005; Anderson et al., 2004).

Second, there are virtually no empirical examinations of the link between family instability and children's romantic involvement early in life – during childhood and preadolescence. This is surprising considering the research that describes experiences during childhood as the foundation on which adolescent and young adult romances are built (Brown, 2004; Furman, Brown, & Feiring, 1999; Sullivan, 1953). Childhood experiences may represent an important period for romantic development within the life course. Furthermore, research has shown that family instability is influential on other aspects of children's development (Cavanagh & Huston, 2006). Shifts in trajectories of romantic interest and involvement due to exposure to family instability may first be evident during childhood.

## Research Questions

The primary objective of this project is to investigate how exposure to family instability impacts trajectories of romantic interest and involvement during childhood. The data come from a longitudinal study of the family environment following divorce called the Texas Families Project (TFP). The sample consists of mothers and their children from the Southwestern United States who recently filed for divorce. Data on the child, mother, and household were collected over the course of two years, with extensive information about maternal repartnering and children's exposure to family instability. These data provide an excellent opportunity to model the links between concurrent family instability and the development of romantic interest and involvement as children mature.

Before I can study how characteristics of maternal repartnering impact children, a fuller exploration of romantic interest and involvement during childhood is a necessary first step. The first research question of this project extends the literature on opposite sex relationships across the life course by exploring romantic interest and involvement during childhood and preadolescence. Though very little is known about romance during childhood, this paper will provide an empirical examination of how and when children first become romantically interested in and involved with the opposite sex. Two analytic steps must first be completed to achieve this. The first step provides a baseline analysis of the emergence of opposite sex romantic relationships by validating measures of children's romantic interest and involvement. This relies on cohort sequential data on five to 11 year olds participating in up to 3 assessments during a two year window. Using factor analysis

and growth modeling techniques, I establish the measure and growth trajectory of romantic interest and involvement that is examined throughout the remainder of this project.

The second research question explores variation in romantic interest and involvement across key developmental and demographic variables. Concurrent development and stable demographic characteristics will be included in the growth models of romantic trajectories. Variation due to time-variant variables (e.g., cognitive, social, and pubertal development) and time-invariant variables (e.g., gender and race/ethnicity) will be explored.

Finally the third research question takes advantage of the data available in the TFP to explore how exposure to family instability impacts the emergence and trajectory of romantic interest and involvement during childhood and preadolescence. This study pushes back the study of links between parents and children's romantic lives by focusing on this association earlier in life, during childhood. This data also allows for a more nuanced definition of family instability. Unlike previous studies which generally limit family instability to divorce and marriage, there are additional transitions that children are exposed to as parents recover from divorce and reengage in the romantic relationships (Amato, 2005; Davis & Friel, 2001). For example, children may witness repartnering such as cohabitation, dating, break-ups, and sleep-overs (Anderson & Greene, 2005; Anderson et al., 2004; Brown, 2004; Raley, 2001). How these transitions impact children's development warrants empirical examination. Analyses in this study will

explore both the effects of maternal repartnering as well as mothers' attitudes regarding repartnering on children's romantic interest and involvement

## Literature Review

### *Family Instability and Romantic Interest and Involvement*

The structure of the family has undergone dramatic transformations, resulting in wide variation in children's experiences within the family. Fewer than half of all US children live with two biological married parents throughout childhood and adolescence (Bumpass & Lu, 2000; McLanahan & Sandefur, 1994; Teachman, 2003). Most children live in an alternative family form such as with single, cohabiting, or divorced parents for at least some portion of their lives.

Unfortunately, exposure to family instability represents a major risk factor for children's general well being (Amato & Keith, 1991; Cherlin et al., 1991; Wallerstein, 1991). Children from divorced families tend to score lower on indicators of social, academic, and psychological well being (Amato, 2001; Cavanagh & Huston, 2006). There is also extensive evidence that exposure to family instability has both long and short term consequences specifically related to children's trajectories of romantic involvement across the life course. Long term implications of family instability are evidenced in the intergenerational transmission of divorce where exposure to parental divorce is associated with a greater likelihood of children's divorce (Amato & DeBoer, 2001). This elevated risk of divorce may be due to entry into marriage at younger ages and with less education (Bumpass, Martin, & Sweet, 1991; Mueller & Pope, 1977;

Thornton, 1991). Children exposed to family instability also report poorer quality relationships in their own marriages than their counterparts with continuously married parents (Amato & Booth, 1991, 1996, 2001).

Others have focused on more proximal effects of marital instability by exploring links between family instability and sexual activity during adolescence. Living with biological married parents seems to provide a buffer against precocious sexual activity as adolescents from divorced or single parent families face a significantly greater risk of initiating sexual activity earlier than their peers (Davis & Friel, 2001; K. A. Johnson & Tyler, 2007; Lammers, Ireland, Resnick, & Blum, 2000; Quinlan, 2003; Santelli, Lindberg, Abma, McNeely, & Resnick, 2000; White & DeBlasse, 1992). Father absence is particularly risky for females and family disruption predicts early sexual debut for males (Campa & Eckenrode, 2006; Ellis et al., 2003; Rai et al., 2003) The presence of a stepfather is associated with a greater risk of early sexual debut for adolescents though adolescents with higher rates of stepfather involvement report more restrictive attitudes regarding sexual activity (Day, 1992; Menning, Holtzman, & Kapinus, 2007; Quinlan, 2003). These effects have been shown to be independent of other family processes such as parental involvement (Pearson, Muller, & Frisco, 2006; South, Haynie, & Bose, 2005).

New research has examined the effects of family instability with a focus on adolescent romantic involvement. Adolescents from two-biological married parent families are less likely to report romantic involvement than those from step or single parent families (Cavanagh et al., 2008). The cumulative effects of multiple marital

transitions also increases the odds that adolescents would be romantically involved. Marital transitions during middle childhood and early adolescence have the strongest impact on adolescents' romantic involvement. Adolescents exposed to marital disruption also begin dating earlier than those whose parents were continuously married (Sullivan & Raley, 2008).

Exposure to parental marital transitions and instability carries over into children's own lives, implying parents and children's lives are inextricably linked (Elder, 1994, 1998). Yet this literature has primarily focused on children's exposure to formal transitions such as marriage and cohabitation. Less attention has been granted to the more informal transitions, like maternal dating, sleep overs, and dissolution of these romantic relationships, or the maternal attitudes that accompany these transitions (Anderson & Greene, 2005; Anderson et al., 2004). The characteristics of family instability and maternal repartnering following divorce may have direct and measurable consequences for children's trajectories of romantic involvement. Specific aspects of family life may undergo substantial change depending on maternal repartnering behaviors and attitudes which may impact children's trajectories of romantic interest and involvement. To uncover what aspects of maternal repartnering are responsible for this link, it is necessary to take a closer look at aspects of the family context that may be altered by instability.

### *Impact of Family Instability on Family Context*

#### *Family Socialization*

The family is an important source of information about appropriate behavior

(Davis & Friel, 2001). The socialization of attitudes, norms, and behaviors with a romantic and sexual context originate within the home environment through parents' behaviors and attitudes (Thornton & Camburn, 1987). For example, the marital relationship, particularly the types of attitudes and behaviors parents exhibit, provides children with a model of forming and maintaining romantic relationships (Bandura, 1977; Crockett, Raymond Bingham, Chopak, & Vicary, 1996). The marriage provides children with an example of the characteristics and commitment in close relationships (Wolfinger, 2005). Children may internalize different attitudes regarding romantic involvement depending on their exposure to family instability. Children who grow up in families with continuously married parents may be more likely to expect and value long term, stable relationships. These types of intimate relationships have high barriers to entry, making it likely that these individuals postpone romantic involvement. Alternatively, children who experience marital disruption may perceive romantic relationships as transient with lower barriers of entry following exposure to the formation and dissolution of their parents' marital and romantic relationships.

However, this paper focuses on the experiences of children following parental divorce. For these individuals, I am interested in the variation in romantic interest and involvement that can be attributed to maternal romantic repartnering in the two years following divorce. Mothers who are involved in few or no romantic relationships following divorce may present a model that romantic relationships are serious and not to be entered lightly. They may signal that the breakup of romantic relationships can be very

painful and children should be hesitant to open themselves to such pain. Family relationships compared to relationships with nonfamily members may be emphasized in these households. The transmission of these types of messages would be evidenced in low or delayed romantic interest and involvement among children.

Mothers who report high rates of repartnering may transmit an entirely different model of romance to their children. Higher rates of instability and exposure to parental repartnering may increase children's awareness of romantic relationships. Greater awareness of romances may accelerate children's attention to and involvement in opposite sex relationships. Observing their mothers move into and out of these relationships may also signal low barriers of entry into romantic relationships, increasing the likelihood that children may emulate maternal repartnering characteristics.

It is less clear what models mothers provide their children when they are involved in moderate amounts of romantic relationships. Maternal romantic involvement may signal recovery from the divorce thus implying romances are an appropriate type of relationship to establish. Moderate involvement may increase children's awareness of romance but in doses they are better equipped to handle. Romantic involvement and interest for these children may fall between those who are exposed to low or high rates of maternal repartnering.

Additionally, it is uncertain if involvement in specific types of relationships has different effects on children's romantic interest and involvement. If mothers provide models of serious and stable relationships following divorce, these experiences may more

closely resemble the experiences children have from continuously married families. When mothers limit their romantic involvement to stable and committed relationships, children may report depressed romantic interest and involvement. In instances where mothers are involved in more casual relationships, children may perceive romance as more accessible to them and have accelerated romantic trajectories.

Inherent in this discussion of maternal repartnering is exposure to breakups. It is unclear what model of romance children may internalize in the face of mothers' breakups. Mothers' breakups may serve as additional evidence of the transient nature of romantic relationships for some children, thereby reducing their perceived barriers to these relationships. However, breakups may also expose children to the heartache that can accompany romantic involvement. This may parallel the pain they witnessed during divorce and result in reluctance to expose themselves to the pain and hurt of breakups.

Following divorce, there is some pressure for parents to recover and reengage in romantic relationships (Anderson & Greene, 2005; Anderson et al., 2004; Hetherington & Kelly, 2002). Movement back into the romantic domain may be precipitated by changes in mothers' attitudes and behaviors regarding romantic involvement. There is evidence that these attitudes may also contribute to the models of relationships that children internalize (Whitbeck, Simons, & Kao, 1994). Parents' repartnering attitudes and behaviors including greater interest in and efforts to date may also increase children's awareness of romantic relationships.

### *Family Control*

Instability also has implications for parents' control of children due to changes in the makeup of the household (Thomson, McLanahan, & Curtin, 1992; Thornton, 1991). Marital dissolution often means that children primarily live with one parent, thereby reducing the number of adults in the household that can provide oversight (Hogan & Kitagawa, 1985; McLanahan & Sandefur, 1994). Single parents are often less equipped to provide children with guidance, rules, and monitoring in the wake of instability (Cottrell et al., 2003). Reductions in the amount of monitoring that parents can provide their children has implications for their romantic and sexual behavior (Longmore, Manning, & Giordano, 2001). Mothers may be able to place fewer restrictions on children's attitudes and behaviors, resulting in children's greater latitude to develop romantic interest and involvement. The ramifications of reduced maternal control may be evidenced in accelerated rates of romantic interest and involvement.

Changes in the family environment can also result from the addition of new household members such as a parent's romantic partner. Romantic partners are often not considered a legitimate authority figure in the household, weakening parental control over children (Baxter, Braithwaite, Bryant, & Wagner, 2004). The introduction of romantic partners may aggravate the development of romantic interest and involvement, further accelerating these children's romantic trajectories.

### *Family Involvement*

Following instability, parents struggle to adapt to changes in the family (Amato,

2000; Zill et al., 1993; Hines, 1997). Whether recovering from marital dissolution or adapting to new family members following a marriage, parents often are less able to devote time and attention to their children due to the stress and poorer communication, interactions, and relationship quality that accompany instability (Lauritsen, 1994). This leaves children without the emotional support and closeness that they require (Sweeney, 2007; Cavanagh & Huston, 2006). Children may react to the loss of parental support and closeness by seeking out alternative relationships.

Mothers who are actively engaging in romantic relationships also may be able to devote less time to their children. Children who are exposed to higher rates of repartnering may be compelled to form their own romantic relationships. These relationships may serve as a substitute for the mother-child relationship weakened following instability and maternal repartnering.

Mothers' attitudes may also impact children's perceptions of family involvement. Following divorce, many parents feel the added pressure of being a single parent while also balancing their new social life (Anderson & Greene, 2005). The strain of balancing two different aspects of their new life may lead mothers to place more focus on one role versus another. The mothers who desire to develop their romantic lives may be more likely to have children who seek out romantic relationships to replace the loss of the parent-child relationship. Conversely, women who place more emphasis on their role as a mother may have stronger relationships with their children, thereby reducing children's need to seek out alternative sources of closeness and support.

### *Emergence of Romantic Interest and Involvement*

This literature suggests that exposure to family instability sets individuals on different trajectories – one toward earlier involvement and poorer long term well being. Yet it is unknown how early in life individuals are sorted into these different developmental trajectories. Research has shown that divorce that occurs during middle childhood and preadolescence has the strongest effects on children's outcomes (Amato, 1996; Cavanagh et al., 2008), implying that family instability may impact romantic trajectories as early as childhood. However before any hypotheses for links between mothers and children's romantic lives can be evaluated, a fuller exploration of romantic interest and involvement during childhood is necessary.

Though the previous section outlined predicted associations between mothers and children's romantic trajectories, there is no established framework for describing the emergence of romantic interest and involvement during childhood. Little research has empirically addressed the initial stages of romance during childhood (Compián, Gowen, & Hayward, 2004; Zimmer-Gembeck, 2002). Research from a nationally representative study of adolescents suggests that romantic involvement begins during late childhood and preadolescence for some (Carver, Joyner, & Udry, 2003). By age 12, approximately one-third of preadolescents reported a history of romantic involvement. Yet this study like most others fails to capture when romantic involvement begins for a substantial portion of preadolescents. There is some evidence that this process is underway by late childhood. Girls and boys as young as 10 and 11 years old spend a considerable amount

of time thinking about the opposite sex (Richards, Crowe, Larson, & Swarr, 1998). This small literature suggests that romantic interest and involvement is already underway during late childhood and preadolescence.

This lack of information about when and how children first become interested and involved in romantic relationships is paralleled by uncertainty about the qualities of romantic interest and involvement at this age. An understanding of children's romantic interest and involvement may be achieved through comparisons to opposite sex friendships. Similarly, a conceptualization of romantic interest and involvement that is developmentally relevant for and applicable to a younger sample may be adapted from the adolescent literature.

#### *Friendships as distinct from romances*

The characteristics of opposite sex romantic relationships should be qualitatively different from opposite sex friendships. Possible differences between friendships and romances may be adapted from pre- and early adolescents' descriptions of opposite sex relationships. Preadolescents are able to distinguish between romantic relationships and friendships with the opposite sex (Connolly, Craig, Goldberg, & Pepler, 1999). Friendships were more likely to be described as affiliative and companionate, using terms such as liking and being comfortable with someone. Romances were characterized as passionate with a strong emotional and physical attraction. Romantic relationships were also described as committed, exclusive relationships between two partners. Even among a young and romantically unexperienced group, individuals are able to grasp the

differences between romances and friendships during late childhood and early adolescence.

*Romance during childhood versus adolescence*

Borrowing from their descriptions of romances, I expect the characteristics of children's' romantic interest and involvement to also include passion, attraction, and desire. Passion may be associated with heightened emotionality where a child may report strong feelings of liking or loving a boy or girl. It may be characterized by a short lived infatuation or a longer lasting affection for another. Excited feelings about a boy or girl may be associated with being attracted to someone of the opposite sex and thinking he or she is cute, dreamy, or cool. Children may signal these feelings through behaviors like holding hands or sitting next to one another. Desire for romantic involvement may be signaled by changes in the way they act, the way they dress, and the activities in which they participate. These efforts may directed toward gaining the attention and admiration of members of the opposite sex and reciprocating romantic interest. It may also signal the desire to attain the socially recognized status of a couple in instances where status is achieved through romantic involvement (Connolly et al., 1999; Raley & Sullivan, under review). As the vast majority of 12 and 13 year olds desire romantic involvement (Sullivan, 2006), I expect a similar desire to exist during childhood and preadolescence.

Finally, there may be a social component to romantic interest and involvement. Children are heavily reliant on their same-sex peer group for support and friendship (Buhrmester & Furman, 1987) Friends may talk about who is cute, discuss who is going

out with who, and share their experiences. Friends may also place sanctions on one another for romantic interest and involvement. As boys and girls begin to understand what it means to "like" a boy or girl, the repercussions of romantic interest and involvement may be felt within their social group. For example, children may react to their peers' romantic interest and involvement by teasing each other. A child may be equally open to teasing if he or she is the object of another's desire. Teasing may extend to exclusion from activities or groups if one child's romantic interests or involvement strays too far from the social group's norms. Children may be subject to teasing if they spend too much time with or have too many friends of the opposite sex.

These characteristics are also found in adolescent and adult romances. However, other characteristics of adolescent and adult romance prove to be a poorer fit with children's experiences (Levesque, 1993; Shulman & Kipnis, 2001). The maturational and social constraints of a younger group of individuals must be considered. For example, mobility restrictions make them less able to go out on dates which are typical of adolescence. Instead, this younger sample may be more likely to evidence romantic behaviors such as sitting next to each other at school or on the bus. Though holding hands may seem more casual to a researcher, the opportunity for more physical and emotional intimacy may be difficult to come by for children. Asking children if they have ever been on a date is less appropriate than asking them if they have had a crush on a girl or boy or ever tried to get a girl or boy to notice them.

Similarly, the duration, stability, and commitment levels of romantic interest and

involvement during childhood and preadolescence is unknown. Younger adolescents' romances tend to be more temporal though romantic experiences tend to become more stable and long lasting over time (Collins, 2003; Shulman & Scharf, 2000). It is unclear how quickly children move between romantic interests. Infatuations and crushes that are common among children may be fleeting but should not be discounted (Thorne, 1993).

Another characteristic of romance that may be less applicable to a younger sample is reciprocity. Preadolescents report involvement in romantic relationships but are less likely to indicate reciprocated relationships (Carlson & Rose, 2007). Though romantic relationships are inherently a dyadic process, romance during this stage may include a more distal romantic interest where children have crushes on others from afar. As I am interested in the very first experiences in the romantic domain, a more broad and encompassing definition of romantic involvement is appropriate for this project.

#### *Variation in the Development of Romantic Interest and Involvement*

At the risk of trivializing early experiences within the romantic domain, these opposite sex relationships are often transient and take the form of crushes and infatuations. Yet these relationships may still inspire strong emotions and convictions regarding romantic interest and involvement. Though they differ from adults' romances, it is unfair to classify them as any less important. The initial forays into romance may seem unsophisticated yet the relationships and experiences that occur during this phase likely serve as the training ground for more intimate and stable romantic relationships during later life (Brown, 1999; Collins, 2003; Furman et al., 1999; Sullivan, 1953). Success in

forming and maintaining relationships during childhood and preadolescence may have implications for the trajectory of romantic involvement long into adulthood.

Yet the potentially harmful correlates of romantic involvement cannot be ignored. Especially during adolescence, there is evidence that romantic involvement can be detrimental for individuals' health and well being (Joyner & Udry, 2000). There is even evidence that these effects can extend into adulthood (Sullivan, 2006). It should be noted that while interest and involvement in romantic relationships is a normative developmental task (Collins, 2003; Furman et al., 1999), the timing and characteristics of involvement are key. As for sexual and romantic involvement during adolescence and adulthood (Carver et al., 2003), there is likely a great deal of variation in the emergence and development of romantic interest and involvement across children. The emergence of romantic interest and involvement may correspond to other major developmental tasks of childhood. Developmental factors may stimulate and accelerate the emergence of romantic interest and involvement during childhood. Existing literature suggests that levels of cognitive, social, and pubertal development may be predictors of children's romantic interest and involvement trajectories. There is also evidence that some demographic variables such as race/ethnicity and gender may be responsible for variation in the development of romantic interest and involvement. The following sections review how variation in trajectories of romantic interest and involvement may be linked to developmental and demographic factors.

### *Cognitive Development*

During childhood and preadolescence, the brain undergoes dramatic maturation of the frontal lobes and myelination of nerve cells, enabling higher order thoughts and actions (Anderson, Anderson, Northam, Jacobs, & Catroppa, 2001; Casey, Giedd, & Thomas, 2000; Casey, Tottenham, Liston, & Durston, 2005; Choudhury, Blakemore, & Charman, 2006). Changes in the prefrontal and parietal area, which are responsible aspects such as problem solving, socialization, emotion, personality, judgment, abstract reasoning, and sensory input, exhibit dramatic rates of development (Giedd et al., 1999; Gogtay et al., 2004; Sowell, Trauner, Gamst, & Jernigan, 2002; Toga, Thompson, & Sowell, 2006). Development in these areas peaks at the end of childhood around 12 years.

This development and reorganization has been described as a period of fine tuning resulting in greater efficiency and processing abilities (Herba & Phillips, 2004; Paus, 2005). The development of the brain enables individuals to reach cognitive functioning that nears adult level processing. Individuals become more skilled at planning, multidimensional and hypothetical thinking, and grasping ambiguous concepts (McClintock & Herdt, 1996; Inhelder & Piaget, 1958; Piaget, 1954). Children with more advanced cognitive development may be able to more readily grasp the meaning of romantic interest and involvement, arguably an ambiguous concept. Individuals with greater capacity to understand abstract concepts such as attraction or love may develop romantic interest and involvement earlier than their peers. However, more developed

romantic interest may not necessarily lead to the initiation of more romantic experiences (Steinberg, 2005). Cognitive development may simply signal the capacity to understand romantic concepts.

### *Social Development*

Physiological changes leave children increasingly able to understand the social world in which they exist (Hammack, 2005; Lewis & Carpendale, 2002) and to negotiate new forms of relationships (Buhrmester & Furman, 1987; Furman & Buhrmester, 1992; Rose, 2007; Larson & Richards, 1991). Cognitive development also enables children to form a more flexible understanding of the social and physical rules that govern our world (Browne & Woolley, 2004; Levy, Taylor, & Gelman, 1995). Evidence of this flexibility can be seen in the makeup of social networks. Though younger children primarily play with same sex peers (Fagot, 1977; Maccoby, 1988; Pellegrini, 2004; Strough & Covatto, 2002; Thorne, 1993), network constraints on sex segregation relax as individuals mature. Children gradually expand their social networks to include interactions and relationships with members of the opposite sex resulting in larger and less homogeneous social groups (Kovacs, Parker, & Hoffman, 1996; Smith & Inder, 1990; Bukowski, Newcomb, & Hartup, 1996). While same sex peer friendships are consistently rated as central throughout childhood and adolescence, cross sex relationships emerge as salient relationships as individuals reach preadolescence (Buhrmester & Furman, 1987; Feiring, 1999; Furman & Buhrmester, 1992). Though children may be subject to criticism in cases of early involvement in cross sex friendships compared to their peers (Fagot, 1977),

social networks increasingly consist of opposite-sex peers and romantic partners (Bukowski et al., 1996; Carver et al., 2003; Connolly, Craig, Goldberg, & Pepler, 2004; R. B. Smith, Davidson, & Ball, 2001). As children mature, they break free of the rules which previously required sex segregation. Successfully navigating these transitions requires social skills to adapt to the new and complex social arenas in which they exist.

Improving social skills also help children understand and predict the thoughts and actions of others enabling them to understand things from others' perspectives (Flavell, 2000; Repacholi & Slaughter, 2003). The ability to understand what others are thinking may be reflected in patterns of romantic interest and involvement over time. One study of childhood romance suggests a precipitous drop off in interest and involvement in opposite-sex relationships occurs around age seven (Leaper, 1994; Leaper & K. J. Anderson, 1997). One explanation for this drop off may be that young children begin to realize what it means to like a boy or girl from an adult's perspective. Children's understanding of the implications of liking a boy or girl may be reflected in depressed levels of romantic interest and involvement during middle childhood.

### *Pubertal Maturation*

The transition from childhood to preadolescence is also marked by the dramatic changes in pubertal development (Archibald, Graber, & Brooks-Gunn, 2003; Wigfield, Brynes, & Eccles, 2006). Pubertal development includes adrenal and gonadal development and is accompanied by dramatic physical growth and psychological and hormonal changes (Halpern, 2006; Susman, Dorn, & Schiefelbein, 2003). Though the

development of secondary sex characteristics typically occurs during early adolescence, initial pubertal change in the form of adrenal development occurs by late childhood. Cross cultural research has shown that the timing of adrenal development signals an intersection between physiological development and the recognition of children as sexual beings (Herdt & McClintock, 2000).

Physical changes such as breast development for girls and vocal changes in boys may signal sexual maturity. Evidence of sexual maturity may spur individuals to consider themselves as sexual beings and result in the accelerated development of romantic interest and involvement. The presence of secondary sex characteristics may lead children to identify with older adolescents and more closely mimic their romantic and sexual practices. Pubertal maturation may also influence how peers and adults respond to a child. Advanced pubertal development may lead adults to expect young individuals to have strong romantic interest and a history of involvement, thus enhancing the individual's perceived need to be romantically involved. Less developed individuals may look more like younger children and not be expected to be thinking about or participating in romantic relationships. These individuals may report lower levels of romantic interest and involvement.

Hormonal changes may also be responsible for increased awareness of members of the opposite sex, even if no physical development is evident. The influx of hormone production during this developmental period may be linked to an increased sensitivity to romantic interest and attraction (Halpern, 2006). This review suggests that pubertal

development may be associated with romantic interest and involvement through several avenues. Advanced pubertal development may encourage individuals to seek out romantic relationships to satisfy their budding sexuality yet feedback from others may be an equally important factor on romantic interest and involvement.

#### *Variance Across Gender & Race/Ethnicity*

Demographic characteristics as gender and race/ethnicity may be a major factor in the trajectories of romantic interest and involvement. Social norms attached to gender and race/ethnicity regarding romance may influence children's romantic interest and involvement (Collins & Steinberg, 2006). Males generally have less restrictive attitudes regarding romantic and sexual involvement when compared to females during adolescence and adulthood (Feldman, Turner, & Araujo, 1999; Sullivan & Raley, 2008). Boys may have more developed romantic interest and involvement than girls during childhood and preadolescence. However, Giordano and her colleagues developed and tested a hypothesis that girls were advantaged in romance experiences compared to boys (Giordano, Longmore, & Manning, 2006). The characteristics of girls' friendships during childhood closely match the characteristics of romantic relationships, thus their relationship skills more readily translate to their experiences in romantic relationships. Boys' friendships are qualitatively different than romances, leaving them less confident in romantic experiences. This perspective suggests that girls may in fact have more developed romantic interest and involvement compared to boys.

There may also be variation in romantic interest and involvement across

racial/ethnic categories. Data on adolescent romantic involvement suggests that African Americans tend to report the least restrictive attitudes and behaviors regarding romantic involvement compared to other racial/ethnic categories (Feldman et al., 1999; Giordano, Manning, & Longmore, 2005; Sullivan & Raley, 2008). Whites closely resemble trends among African Americans while Hispanic have most reserved rates. African American adolescents are less likely to date compared to Whites however (Cooksey, Mott, & Neubauer, 2002) and are less likely to report ongoing or recent romantic involvement (Carver et al., 2003). It is possible that some of these differences are due to how romantic involvement was assessed (Raley & Pearson, 2006). For this project, it is unclear if there will be any meaningful differences across racial/ethnic categories.

#### Review of Research Questions

The goal of this project is to provide an evaluation of the impact of family instability on children's trajectories of romantic interest and involvement. This project focuses on the experiences of mothers and their elementary school aged children for up to two years after filing for divorce. Unlike previous studies which focus on formal marital transitions, this project attempts to explore the all of the romantic transitions that children are exposed to as mothers repartner soon after divorce. Specifically, I am investigating how these repartnering transitions are linked with children's trajectories of romantic interest and involvement.

#### *Research Question 1*

Before evaluating more complex models, the first research question that must be

addressed within this paper is the exploration trajectories of romantic interest and involvement during childhood. I expect that specific qualities such as passion, desire, and attraction will emerge from children's reports of romantic interest and involvement. As these children rely heavily on their social group during this developmental period, I also expected that children would share romantic experiences and ideas with their friends. Though there is little empirical research that guides my expectations for when and how romantic interest and involvement emerges, theoretical and related literature led me to conclude that romantic interest and involvement would emerge sometime during middle childhood and would increase as children matured. Growth models of change employing longitudinal data will explore trajectories of children's romantic interest and involvement.

#### *Research Question 2*

The second research question builds on these baseline growth models by investigating variation in trajectories of romantic interest and involvement across children. I expect the concurrent change in cognitive, social, and pubertal development will be associated with children's romantic trajectories. Higher levels of pubertal, cognitive, and social development will correspond to higher rates of romantic interest and involvement. In this sense, children who are early maturers in any or all of these domains of development will likewise have accelerated trajectories of romantic interest and involvement. The effect of pubertal maturation will be especially strong for girls. As girls undergo puberty earlier than boys, the effects of pubertal maturation will be evident sooner for girls leading to accelerated romantic trajectories.

Stable demographic characteristics such as gender and race/ethnicity are also expected to covary with children's romantic trajectories. Studies of adolescent romantic trajectories have shown consistent race/ethnic patterns where Hispanics generally report delayed romantic and sexual involvement compared to non-Hispanic whites and blacks. I expect to find similar patterns for this study where non-Hispanic children have accelerated trajectories of romantic interest and involvement compared to Hispanic children. I also expect gender differences to mirror those found in the adolescent literature consistent with Giordano's theory (Giordano et al., 2006) where girls are advantaged due to the development of social skills earlier than boys. Especially with this elementary school aged sample, I expect this effect to hold; girls will report more accelerated trajectories of romantic interest and involvement than boys.

### *Research Question 3*

The final research question and major aim of this paper investigates how trajectories of romantic interest and involvement vary according to exposure to family instability. Specifically, I am focusing on how maternal repartnering behaviors and attitudes may impact trajectories of romantic interest and involvement during childhood. I expect that low levels of maternal repartnering may be associated with depressed trajectories of romantic interest and involvement. Mothers who report few romantic transitions and low levels of interest in repartnering may provide their children with a model that signals relationships have high barriers to entry. Alternatively, mothers with higher levels of interest and involvement in romantic relationships may be more likely to

have children with similarly accelerated romantic trajectories. These children may perceive lower barriers to entry and a greater awareness of romances. Similarly, these children may be more likely to seek out alternative relationships, like opposite sex romances, as parents with romantic partners may have more divided attention following repartnering or lower levels of control.

It is also possible that the types of relationships in which mothers engage may matter for children's trajectories of romantic interest and involvement. Maternal involvement in more committed or stable relationships such as marriage or cohabitation may be related to lower levels of children's romantic interest and involvement. Involvement in less stable or committed relationships and exposure to the break up of these relationships may signal to children that it is acceptable to move into and out of these relationships, leading to accelerated romantic trajectories for children. Though cohabitation is generally not considered stable (Brown, 2004), it may signal a more permanent relationship to the child relative to a dating relationship, especially in the short time frame available with this data.

## CHAPTER 2: GENERAL METHODS

### Data

The data for this study come from a National Institute of Child Health and Human Development (NICHD) funded research project called the Texas Families Project (TFP). This is an ongoing longitudinal study of family environment following divorce. Specifically, the study explores the correlates and consequences of maternal repartnering on child outcomes. Participants were recruited through divorce court records from a metropolitan area in the Southwestern United States. Trained staff collected publicly available divorce court records on a weekly basis for two and a half years from two county courthouses. Over the 2.5 year recruitment period, over 3,200 families with elementary school children filed for divorce.

### *Recruitment*

To be recruited and included in the study, families had to meet a series of step-wise eligibility requirements. During the first eligibility check, contact information was recorded for families filing for divorce if the household included at least one elementary school aged child of whom the mother had primary physical custody. Primary physical custody was established when the eligible child resided in the mother's household at least 50% of each week. When families included more than one eligible child, one of the children who fit the sample criteria was randomly selected to participate. Project staff delivered packets to eligible households that introduced the project and the primary investigators as a research study from the University of Texas at Austin. Recipients of the

packets were informed that they would be contacted by phone to invite them to participate. Information packets were sent to 1,062 households (33.1% of divorcing families with eligible children).

Within several days of expected receipt of the packet, project staff called the mother's household to confirm she received the information and assess the next level of eligibility which required English fluency. Logistics of the research project limited participation to mothers and their children that were fluent English speakers. If eligible, project staff recruited the mothers and their children to participate in the study.

#### *Assessments*

The first in-home visit with the families, Getting Acquainted Visit (GAV), served as a more detailed introduction to the project and a chance to become familiar with project staff. 362 households completed the first in-home visit. Families completed consent forms and provided general demographic information. This visit took place within 120 days of filing for divorce. Families were also informed that they would be paid for their ongoing participation. Following the GAV, assessments were completed approximately every six months. Three comprehensive, in-home yearly visits were completed at Baseline, 12 months, and 24 months later. Additional assessments were completed at six and 18 months over the phone, though data from these assessments was not used in these analyses.

The Baseline visit included comprehensive data collection. Two trained interviewers completed this visit with the mothers and target children. The Baseline visit

was a multi-method structured interview that took approximately two hours to complete. Mothers and target children completed their respective interviews separately and provided information on a wide variety of topics including family relationships, parenting practices, reactions to maternal repartnering, and sociodemographic information. Participants were repeatedly instructed that their participation was voluntary and could be ended at any time. 319 families participated in the Baseline interview. Of the 43 families who did not participate in assessments beyond the GAV, five were deemed ineligible due to English fluency, 33 declined further participation, and five were excluded for other reasons (e.g., incarceration, mental illness). Though all 319 of the mothers participated, one child refused to participate in the Baseline visit and two completed partial interviews.

The format of the Baseline visit was completed two more times, at 12 and 24 months after the initial visit. As data collection is ongoing, the participation and attrition at these two waves of assessment has not yet been finalized. 265 families participated at the 12 month assessment. The data from the 24 month assessment was not finalized at the time this paper was written. Only families who completed their 24 month assessment prior to September 2008 have valid data for the final assessment point. 234 families completed the 24 month assessment by this cutoff. Additionally, monthly diary assessments maintained ongoing contact with the families and provided updated information about maternal repartnering and child well being.

### *Sample Characteristics*

319 households participated at the Baseline assessment. The average household

included approximately 3 people, often two children and the mother. This change in household structure from two parent to single parent was mirrored by a reduction in financial resources of approximately \$15,000 to \$20,000 following filing for divorce. The majority of families reported joint custody (61%) while the remaining had sole-mother custody. Most families considered themselves non-Hispanic White (64%). One quarter of the families were Hispanic and 9% were non-Hispanic Black. This breakdown matches the racial/ethnic breakdown of metropolitan area from which families were recruited.

For most families, this divorce represented the end of the only marriage the children knew. The average length of the focal marriage was almost ten years ( $SD = 5.44$ ). Most families reported parental separation had occurred within the past year. The median length of separation was 6 months. The mean length of separation was skewed by very long separation periods reaching over 5 years by some families ( $M = 14.4$  months,  $SD = 18.64$ ). In over two-thirds of the families, mothers reported that they suggested the divorce.

Mothers and fathers of the elementary school aged children were approximately 39 years old ( $SD = 6.6$  years and 7.3 years respectively). Most mothers at least graduated from high school. 38.3% reported attending some college or specialized training. One quarter graduated from college and nearly 15% had a post-graduate degree. All of the children were elementary school age or about to enter kindergarten (5 - 11 years) at Baseline. The average age of the children was 7.8 years. 51.7% of the sample children were female.

265 mothers and children completed the twelve month assessment. Though 54 mothers and children did not participate in this follow up, the sample demographics were not significantly different than at Baseline. This suggests that attrition was not systematic or selective on a specific family characteristics. The analysis sample for the 24 month assessment includes 234 mothers and children. Again the sample of children and mothers who participated in the 24 month follow up did not significantly differ from the Baseline and 12 month samples.

## Measures

### *Romantic Interest and Involvement*

All children completed twenty items about attitudes and interactions with the opposite sex at the Baseline, 12 month, and 24 month assessments. The literature contains very few examples of questions or scales dealing with cross sex relationships aimed at a young sample. The principal investigators of the TFP developed these questions based on focus groups and their own expertise in child and adolescent development. Though same-sex romantic relationships are widely considered important to study (Diamond, 2003), this study was limited to heterosexual attraction.

A complete listing of the items and descriptive statistics from the Baseline assessment can be found in Table 2.1. The items were worded so that individuals described their behaviors and feelings regarding the opposite sex. Twelve of the questions were answered in a yes/no format. In general, these questions focused on behaviors such as kissing or holding hands with a boy/girl. Children indicated whether they had ever

done these things. The remaining eight questions were answered using a format developed by Harter (Harter, 1982). Children were presented with two contrasting statements (e.g., “Some kids think about who they might marry but other kids don’t think about who they might marry”). Children were asked to chose which dichotomy was more like them. Next, they were asked if it was “a lot like you” or “a little like you.” Responses were coded on a four point scale.

### *Indicators of Children's Development*

#### *Pubertal Maturation*

Mothers completed a questionnaire regarding their children's pubertal development. Different items were used to assess pubertal maturation for boys and girls with responses ranging from no development (0), very little development (1), development definitely underway (2), and development was completed (3). For boys, mothers completed five items. Questions assessed skin changes, hair growth on the face and body, height changes, and deepening of the voice. Mothers described skin changes, breast development, body hair, height changes, and menstruation for girls. For the item on menstruation, the variable was recoded to three if girls had experienced menarche. The median Cronbach alphas for the scale across three waves of data was 0.76 for boys and 0.79 for girls.

#### *Cognitive Development*

Children's cognitive development was assessed using two subscales from the Woodcock-Johnson III Tests of Achievement. Children completed one test for reading

ability (Letter-Word Identification) and one for math skills (Math Fluency). The Letter-Word Identification test assessed children's' recognition of single letters to advanced words through 76 items. The Math Fluency measured the ability to complete basic multiplication, division, addition, and subtraction. Documentation from the publisher of the WJ III claim reliabilities of .80 and higher (Woodcock & Johnson, 1989).

### *Social Development*

Children's social development was assessed through nine questions dealing with their behavior in social situations. The items were adapted from the Social Skills Rating Scale used in the NICHD Study of Early Child Care and Youth Development (Gresham & Elliot, 1990). Items include statements such as “Makes friends easily” and “Controls temper when arguing with other children.” Responses were recorded on a three point scale of not true, sometimes true, and often true. The median Cronbach alpha for the scale across three waves of data was 0.71.

### *Maternal Repartnering*

Data on maternal repartnering focused on both mother's behaviors and attitudes toward romantic involvement. For repartnering behaviors, data were collected continuously throughout participation in the study. Besides collecting information every six and 12 months, information about romantic involvement was also collected on a monthly basis to track changes in mothers' romantic lives.

The TFP targeted specific repartnering behavior to which children were exposed including involvement in a casual and serious dating relationship, a sleep over,

cohabitation, marriage, or break-up of a relationship. To match the format of this data to the assessment of the outcome variables, data regarding repartnering behaviors were transformed to respond to three time points: involvement prior to the Baseline assessment, involvement between the Baseline and 12 month assessment, and involvement between the 12 and 24 month assessment. Categorical variables measuring exposure to casual dating, serious dating, sleep overs, cohabitation, marriage, and break ups were created for each time point. Continuous variables were also created to measure the cumulative number of transitions children experienced between each time point.

There were four indicators of maternal attitudes regarding dating at each time point as well: mothers' efforts to repartner, reinvention efforts, and role strain associated with balancing mothers' romantic needs and children's needs. Each of these scales were developed based on information collected from focus groups with newly divorced mothers (Anderson et al., 2004). A complete list of the items for each indicator of maternal attitudes can be found in Table 2.4. Efforts to repartner were assessed through mothers' reports about the activities she has done or would consider in order to meet romantic partners. Thirteen items were completed and included activities such as "Gone to bars, clubs, or parties," "Joined a gym, visited parks, or attended sporting events," and "Placed your profile on an Internet dating service." The number of events the mother reported were summed and recorded as a count variable. The median Cronbach alpha for the scale across three waves of data was 0.81.

Mothers described also their efforts to reinvent themselves following the divorce.

Eighteen items asked about some common activities that mothers may do as they attempt to recover from the divorce. Activities included purchasing more trendy clothing or had cosmetic procedures. Mothers indicated whether they had already done each of the activities, would consider it, or would never consider doing it. A count of the items the mother had done were compiled for this variable. The median Cronbach alpha for the scale across three waves of data was 0.82.

Finally, two indicators of role strain measured the mother's struggle to balance her own romantic needs and the needs of her children as she repartnered. Seven items assessed the mother's reported needs for romantic companionship. These items included statements such as "It is unreasonable for a child to expect a parent to remain single." Four items assessed how focused the mother was on the needs of her child. Mothers reported how strongly they agreed with statements such as "I think of myself as a mother before any other role in my life" and "I would not marry someone my child disliked." Responses were recorded on a five point scale ranging from strongly agree to strongly disagree and the average response was computed for each subscale. The median Cronbach alphas for the two recoded scales across the three waves of data were 0.72 for mother's romantic focus and 0.78 for child focus.

### Plan of Analysis

The three research questions explored in this project build from a basic growth model of romantic interest and involvement. The following sections describe how the data is managed and modeled for each research question. These analyses are kept

separate to ensure parsimonious models that can be identified. The first question establishes the growth models of romantic interest and involvement while the second and third questions seek to account for variation in individuals' growth trajectories.

*Research Question I: Measurement of Romantic Interest and Involvement*

The first objective of this paper focuses on understanding romantic interest and involvement during childhood. Though the 20 questions were administered as two scales, it is unclear if they assess separate dimensions of romantic interest and involvement. One or more dimensions of romantic interest and involvement may be represented by the 20 items. An exploratory factor analysis will determine the correct factor structure. The outcome of factor analysis is the reduction of a large set of variables to a smaller set of subscales (Comrey & Lee, 1992; Kim & Mueller, 1978).

In this case, factor analysis determines if the 20 observed variables can be described by a smaller set of latent factors. All of the variables are recoded onto the same scale. For the yes/no items, responses of no are coded as zero and yes as one. For the items rated on the four point Harter scale, four is recoded as one, three recoded as .66, two recoded as .33, and one as zero. Additional factors are added and evaluated in a step-wise fashion. A parsimonious factor structure which includes the smallest number of factors that best describes the observed response patterns is adopted.

The factors are also tested for measurement invariance. These analyses focus on whether the latent constructs have different meaning for children of different ages. Any items or scales that do not demonstrate measurement invariance are excluded from

additional analyses.

After finalizing the scales, changes in the latent constructs over time are examined in growth models using a restructured data set that reflects the cohort sequential design detailed in Table 2.3 and 2.3. Growth modeling techniques are key to understanding how individuals change and develop. Developmental processes can be tracked over multiple time points to evaluate rates of growth over time (Boscardin, B.O. Muthen, Francis, & Baker, 2008; Jung & Wickrama, 2008; Muthen, 2004). In this project, development can be monitored through initial levels as well as the rate of change in romantic interest and involvement as they mature.

Growth mixture modeling (GMM) builds on these analyses by enabling researchers to investigate heterogeneity across individuals' rates of growth (Muthen, 2004; B.O. Muthen, 2000; B.O. Muthen & Asparouhov, 2008). Much like latent class analysis, GMM can detect patterns of developmental processes and classifies individuals into mutually exclusive and exhaustive latent classes based on response patterns in manifest variables (Hagenaars & McCutcheon, 2002; Lanza, Flaherty, & L. M. Collins, 2003; B.O. Muthen & L.K. Muthen, 2005). This technique groups individuals together to return the smallest number of latent classes that best describe the observed response patterns.

First, a baseline linear growth model is established for children's romantic outcomes. As there is also some evidence that a nonlinear growth pattern may emerge (Leaper, 1994; Leaper & K. J. Anderson, 1997), models with a nonlinear pattern of

change in romantic interest and involvement are also evaluated. Indices of fit such as Chi square, root mean square error of approximation (RMSEA; Steiger & Lind, 1980), and the comparative fit index (CFI) values are used to find the growth models that provide the best fit with the observed data. Non-significant chi square values, CFI above 0.90, and RMSEA at 0.08 or less indicate a good fit of the model to the observed data.

Heterogeneity in the sample is explored to determine if the data are best described by multiple trajectories of development rather than a single growth model. Additional latent trajectory classes are included in the model in a step-wise fashion until adequate statistical fit is achieved using the Bayesian Information Criterion (BIC; Schwartz, 1978) and the Lo-Mendell-Rubin test (LRT; Lo, Mendell, & Rubin, 2001). Classes are added until a minimum BIC value is achieved and LRT remains significant at the  $p < .05$  level (Muthen & Asparouhov, 2008; Muthen & Muthen, 2007). The models are also evaluated for usefulness to ensure that there are meaningful differences between the classes.

One advantage of using growth mixture modeling is the degree of flexibility that is allowed for the timing and availability of the measure of romantic interest and involvement. This analysis does not require that the assessments are regularly spaced though attempts were made to collect data within 12 and 24 months of the initial visit. There are also no restrictions on missing assessments of romantic interest and involvement. For example, inclusion in the analysis sample does not require that data is available from all three assessments. As shown in Table 2.2, children only have data available for at the ages in which they participated in this study. Growth modeling in

Mplus does not delete cases with missing data but models growth based on available data. This technique ensures the maximum amount of data retention and the best use of the cohort sequential design of TFP.

*Research Question II: Individual Variation of the Trajectories of Romantic Interest and Involvement*

The analytic plan for modeling individual variation in romantic interest and involvement builds on the baseline model of growth established in Analysis I. In these analyses, time-variant and time-invariant variables are added to the model of change. Children's cognitive, social, and pubertal development change across the three assessments and are considered time-varying variables. Gender and race/ethnic category are time-invariant variables. The values for gender and race/ethnicity are compiled from the Baseline data and are assumed to stay the same over time. Each time-variant and time-invariant variable is modeled separately determine its effect on romantic interest and involvement. The output for models with time-invariant variables will include two coefficients for each variable detailing the effect of the variable on the intercept, or the predicted value at age 5, and the slope, or the rate of change over time as children age. The output for models include time-variant models will include coefficients which detail how the value of the variable, such as pubertal development, at a given age impacts romantic interest and involvement at that same age.

Given the complexity of growth models, attention must be paid to the limits of the data and modeling techniques. A model that includes all variables is unlikely to converge

or provide any substantive information. For time-varying variables, the analysis determines how the variables, such as cognitive development, covary with children's reports of romantic interest and involvement. As pubertal development varies according to gender (Halpern, 2006), additional analyses will explore the differential effects of puberty by gender. Although no other gender differences are expected, separate models by gender will also be run for both cognitive and social development.

*Research Question III: The Impact of Maternal Repartnering on Trajectories of Romantic Interest and Involvement*

The final analysis focuses on the primary research objective, the association between maternal repartnering and children's romantic interest and involvement. In this case, family instability is assessed through children's exposure to maternal repartnering attitudes and behaviors following divorce. The first model explores how exposure to specific types of maternal repartnering, such as serious dating, impacts children's romantic interest and involvement. In the methods section, I described creating categorical and continuous variables to assess repartnering transitions. It is unclear which if any of these of these repartnering behaviors may be meaningful for children. For example, cohabitation and sleep over both suggest the presence of a sexual relationship where the mother and romantic partner spend the night together in the same house as the child. Yet I believe that the potentially more formal or serious nature of cohabitations may have different implications for children's romantic interest and involvement than exposure to sleep overs. This example remains an empirical question however that will be

addressed in these analyses.

Another empirical question revolves around how to best classify target children's exposure to repartnering. The previous paragraph describes using categorical variables to determine how exposure to each of the different relationships may impact children. If a child is exposed to both a romantic relationship, cohabitation, and breakup within a year, cumulative exposure to maternal repartnering may be a better predictor of children's romantic interest and involvement. This model includes a continuous variable measuring the total number of repartnering transitions the child experienced. Exposure to specific types of relationships as well as the sum of repartnering transitions are independently tested in these analyses.

Additional models explore how mothers' repartnering attitudes may be related to children's romantic interest and involvement. These analyses include measures of mothers' efforts to date, interest in forming a romantic relationship, and role strain in response to repartnering. The aim is to determine if children are aware of and respond to maternal attitudes regarding repartnering.

Table 2.1 Descriptive Statistics For Romantic Interest And Involvement Items

	%			
	Negative		Affirmative	
	A lot like me	A little like me	A little like me	A lot like me
Some kids get an excited feeling when they are with a girl/boy they like but other kids don't get this feeling	39.2	15.4	8.2	37.3
Some kids spend a lot of time thinking about a girl/boy they like but other kids don't spend a lot of time thinking about a girl they like	43.7	19.9	4.9	31.6
Some kids have a special girl/boy they want to kiss but other kids don't have a special girl/boy they want to kiss	52.0	21.2	4.9	21.9
Some kids your age feel they must have a girlfriend/boyfriend but other kids don't feel they need a girlfriend/boyfriend	53.4	20.0	4.9	21.6
Some kids spend a lot of time talking about a girlfriend/boyfriend but other kids hardly ever talk about girlfriends/boyfriends	60.9	19.5	4.9	14.7
Some kids often dress for a girl/boy to like them but other kids hardly ever dress for a girl/boy to like them	58.6	18.4	4.3	18.8
Some kids want to hold hands with a girl/boy they like but other kids don't want to hold hands with a girl/boy	52.9	18.3	4.9	23.9
Some kids think about who they might marry but other kids don't think about who they might marry	55.6	17.3	3.9	23.2

	%	
	No	Yes
Do you talk to friends about who is cute in class?	64.1	36.0
Have you ever teased a girl/boy because you like them?	86.9	13.1
Have you ever had a girlfriend/boyfriend?	60.7	39.3
Have you ever asked your friends to find out if a girl/boy likes you?	67.5	32.5
Have you ever tried to sit next to or talk to a girl/boy you liked?	64.5	35.5
Have you ever sent a love letter to a girl/boy?	82.6	17.4
Have you ever been kissed by a girl/boy?	76.8	23.2
Have you ever tried to kiss a girl/boy?	85.3	14.7
Have you ever held hands with a girl/boy?	67.0	33.0
Have you ever acted silly to get a girl/boy to notice you?	77.5	22.6
Have you ever had a crush on a girl/boy?	48.0	52.0
Have other kids ever teased you for liking a girl/boy?	70.9	29.1

Table 2.2 Example Of Data Restructuring Into Cohort Sequential Design.

Original data				
Family ID	Age @ Wave I	Romantic Involvement @ Wave I	Romantic Involvement @ Wave II	Romantic Involvement @ Wave III
4001	5	2	4	5
4002	7	3	4	3
4003	8	4	6	7
4004	6	3	3	*
4005	10	5	7	8

Restructured data										
Family ID	Age @ Wave I	Romantic Involvement @ age 5	Romantic Involvement @ age 6	Romantic Involvement @ age 7	Romantic Involvement @ age 8	Romantic Involvement @ age 9	Romantic Involvement @ age 10	Romantic Involvement @ age 11	Romantic Involvement @ age 12	Romantic Involvement @ age 13
4001	5	2	4	5	*	*	*	*	*	*
4002	7	*	*	3	4	3	*	*	*	*
4003	8	*	*	*	4	6	7	*	*	*
4004	6	*	3	3	*	*	*	*	*	*
4005	10	*	*	*	*	*	5	7	8	*

Table 2.3 Sample Size For Each Age Group In Cohort Sequential Design

Age in years	Baseline	12 Month Assessment	24 Month Assessment	Total
5	45	-	-	45
6	55	38	-	93
7	48	49	32	129
8	39	37	43	119
9	53	30	33	116
10	39	47	23	109
11	40	29	42	111
12	-	31	27	58
13	-	-	30	30

Table 2.4 List Of Items From Maternal Repartnering Attitude Scales

***Efforts to Repartner***

Gone to bars, clubs, or parties  
Gone to bookstores, coffee shops, music stores  
Gone to bars, clubs, or parties  
Placed your profile on internet dating services  
Reviewed the profiles of others on internet dating services  
Placed your profile on noninternet dating services  
Reviewed the profiles of others on noninternet dating services  
Let friends or acquaintances know that you are ready to date again  
Attended singles groups, clubs, activities  
Contacted old friends or acquaintances  
Contacted former boyfriends or romantic partners  
Joined a gym, visited parks, attended sporting events  
Taken classes or joined volunteer activities

***Reinvention Efforts***

Tried a new hairstyle or different hair color  
Purchased more trendy clothes or lingerie  
Had body ornamentation done, like tattoos, piercings, anything else  
Found new interests or hobbies  
Taken educational classes or self improvement workshops  
Had cosmetic procedures, like Lasik Botox  
Purchased a more recent vehicle  
Tried a diet or tried to lose weight through changing what you eat  
Purchased new or different makeup or perfume or had a makeover  
Started an exercise program or increased your efforts at an existing program  
Joined a new club or organization like a book club church group dating service  
Read books or magazine articles on ways to improve your life  
Changed your name either formally or informally  
Gone to a tanning salon  
Had cosmetic dental work, including teeth whitening  
Become interested in new music  
Changed the kinds of activities you do with friends  
Reconnected with single friends or made new single friends

***Role Strain: Child Focus***

I would not marry someone my child disliked  
My child could talk me out of continuing a romantic relationship with someone  
I would stop seeing someone if my child disliked the person  
If my date had hurt my child's feelings several times, I would talk to my date

***Role Strain: Repartnering Focus***

If my date had hurt my child's feelings several times, I would talk to my child  
It is unreasonable for a child to expect a parent to remain single  
I adjust my dating to match the pace that my child can handle (Recoded)  
Parenthood is overrated  
A child's needs for attention is not a valid reason to cancel or reschedule a date  
Just because my child dislikes someone is not enough of a reason for me to stop seeing them  
My child's welfare is my top priority (Recoded)  
In matters of dating, parents need to think of their own happiness because children will not be with them forever

## CHAPTER 3: RESULTS

### Research Question I

#### *Descriptives & Factor Analysis*

The first objective of this paper deals with measurement of romantic interest and involvement for this sample of children. To accomplish this, the first step required an exploration of the 20 items for underlying latent constructs. A series of exploratory factor analyses compared models that included up to four factors in a stepwise fashion, using the Mplus defaults of oblique rotation of quartimin and the maximum likelihood estimator (Muthen & Muthen). Both a substantive and statistical examination of the four models suggested that a two factor structure fit the data best (CFI=0.926, RMSEA = 0.06). Items were also evaluated for contribution to the factors. If items did not load on any factors and did not make a substantial contribution to the model, they were discarded. In this case, all items loaded on the two factors.

The two factors that emerged matched the original set up of the survey. All the items from the 12 item yes/no scale loaded onto one factor while the 8 items with the 4 point Likert responses loaded onto a second factor. Table 3.1.1 lists the factor loadings as well as significance tests of the loadings. Two items loaded significantly on both factors but were classified according to the highest factor loading. The 12 yes/no items generally dealt more with behaviors and activities in which the children have participated. This scale is labeled romantic involvement. The other 8 items tended to deal more with children's thoughts and feelings regarding the opposite sex and is referred to as romantic

interest. A confirmatory factor analysis (CFA) using this factor structure was carried out for data from the 12 and 24 month assessments. CFA is preferred in this project due to the presence of error in the measurement, whereas principal component analysis requires relatively error free measures. Fit statistics indicated a moderately good fit for the 12 month (CFI = 0.88; RMSEA = 0.07) and 24 month data (CFI = 0.88; RMSEA = 0.07).

After establishing the factor structure for the romantic interest and involvement scales, it was also important to establish measurement invariance to ensure that children responded to the items in a similar fashion regardless of age (Vandenberg & Lance, 2000). To test measurement invariance of the scales, I broke the sample into two groups of children aged 5 to 8.5 years and 8.5 to 11 years at Baseline. With two groups of children, I could compare the measurement structure to see if younger and older children responded to the items in a similar manner by comparing a more and less restrictive model. The more restrictive model included the following assumptions: intercepts and factors loadings constrained to be equal across groups; residual variances free; factor means zero in one group and free in the others (Muthen & Muthen, 2007 p. 399). The fit statistics for this restrictive two group model indicated a moderately good fit (CFI=0.872, RMSEA=0.076). I compared these results to a less restrictive model with relaxed constraints in order to determine if there was measurement invariance for the two factors. The factor loadings were no longer constrained to be equal and allowed variation across the older and younger children, thus testing for variance in response patterns according to age. The best fit between the two models is established by subtracting the chi square

value and degrees of freedom of the less restrictive model from the more restrictive model. If the resulting chi square value is not significant, the more restrictive model is a better fit and provides evidence for measurement invariance. However if the chi square value is significant, the less restrictive model provides the better fit with the data. In comparisons of the more and less restrictive models for older and younger children, the resulting chi square value was significant indicating that there are substantial age-related differences with a two-factor CFA (Equation 1).

$$\text{Equation 1: } (\text{Chi}^2) 705.852 - 667.345 = 38.507; (\text{df}) 374 - 356 = 18; p < .05$$

However, this does not provide information about which items evidenced measurement invariance. To determine this, I repeated the above steps comparing both more and less restrictive models independently for romantic interest and romantic involvement factors. The factor with the 12 yes/no items, romantic involvement, did prove to have measurement invariance (Equation 2). The more restrictive model that included constraining the factor loadings to be equal provided a better fit to the data suggesting that younger and older children responded to this scale in a similar fashion (RMSEA=0.078). The Cronbach alpha for the 12 items was 0.86.

$$\text{Equation 2: } (\text{Chi}^2) 241.071 - 230.007 = 11.064; (\text{df}) 130 - 119 = 11; p > .05$$

There was inconsistent evidence for measurement invariance of romantic interest however (Equation 3). For this scale, older and younger children had similar response patterns for six of the eight items. Among both older and younger children, there were no substantial differences in factor loadings, suggesting measurement invariance for these

six items. However the remaining two items showed very different response patterns when comparing the standardized estimates. Younger children were more likely to report "Some kids often dress for a girl/boy to like them" and "Some kids think about who they might marry" than older children. As the final two items were not invariant and did not have face validity as a separate scale, they were not included in any further analyses. There was not enough evidence that these were meaningful items and would yield important information about the emergence of romantic interest within this sample. Only the six measurement invariant items were used to assess romantic interest. The Cronbach alpha for these six was 0.87.

$$\text{Equation 3: } (\text{Chi}^2) 149.879 - 128.249 = 21.630; (\text{df}) 54 - 47 = 7; p < .05$$

As there was some evidence of age differences, it was prudent to take a closer look at the responses at the item and scale level by child age. As a reminder, children aged 5 to 11 completed these items up to three times in the yearly assessments. The youngest children completed them at age 5, 6 and 7 years while the oldest children were ages 11, 12, and 13. For the following descriptive analyses, there is no assumption of independence of responses as children can be represented in these graphs up to three times at different ages. These descriptive statistics merely provide an alternative perspective of change over time.

For romantic interest, Figure 3.1.1 provides a detailed graph of mean values for each item and the overall mean for the scale by age. The bars represent how much the children in each age group felt that statement was like them. The average romantic

interest by age showed some significant variation by age. The youngest children reported higher romantic interest than middle aged children ( $p < .05$ ) and older children ( $p < .10$ ).

For most of the 12 yes/no items of romantic involvement, there were no significant differences in the number of romantic activities children reported. Figure 3.1.2 represents the percentage of children at each age group that said “yes” to each romantic event. Younger children were significantly more likely to report sending love letters than older children. Older children were more likely to report having a crush on someone. Figure 3.1.3 displays the average number of activities reported by age at the scale level. Ten, 11, and 12 year olds reported significantly more romantic involvement than their younger counterparts. Interestingly, five year olds also reported moderately higher levels of romantic involvement than other children but the differences were not significant.

### *Growth Modeling*

#### *Romantic Interest*

The next step in analyzing romantic interest was to model a baseline growth model across childhood. A single growth curve fit the data moderately well ( $\chi^2(19, N = 315) = 42.612, p = 0.001$ ), CFI = 0.896, RMSEA = 0.063). The intercept and slope of this growth curve suggested that as children age, their levels of romantic interest decrease (intercept = 0.45, slope = -0.01). Rates of romantic interest are highest for the youngest children.

In the second step of analyzing romantic interest, I explored whether there were different trajectories of romantic interest across the children. Based on fit statistics (Table

3.1.2), a two class model fit the data best. There was strong evidence that children were best classified into two groups based on their levels of romantic interest (Figure 3.1.4). Approximately one quarter of the children tended to report elevated rates of romantic interest throughout childhood. The second larger group of children reported low levels of romantic interest across childhood.

These results suggest that romantic interest does not evidence developmental change over time. Classification into one of the two latent classes seems to be based on relative levels of romantic interest. The level of romantic interest stays relatively stable over time with a slight decrease as children age. Children tend to either report consistently high or consistently low levels of romantic interest across childhood. The makeup of the two groups of children did not differ on demographic variables (Table 3.1.3).

#### *Romantic Involvement*

Given that all 12 items all loaded onto a single factor, it was appropriate to recode the responses on these items as a count variable to more accurately reflect the format of the questions. As is apparent in Figure 3.1.2, frequencies of participating in each of the romantic involvement items are not normally distributed. Responses are skewed due to children's greater likelihood of reporting zero romantic involvement events more frequently than would be expected based on a Poisson distribution (Kreuter & Muthén, 2008). To account for this skew, change over time for romantic involvement was assessed using a zero inflated Poisson (ZIP) growth mixture model to model developmental

change for count variables. In ZIP growth models, two models are simultaneously evaluated. The first determines the probability of reporting a zero, the "zero class," where the probability of zero is 1. If individuals report a non-zero, the probability of a zero is described through a Poisson distribution (Muthen, 2000). This analysis accounts for occurrences of zero inflated Poisson distributions. The model fit for these analysis must be evaluated using different criteria. Using chi square values is not best practice because of the large number of empty cells. Reporting the log-likelihood value, number of free parameters, and BIC statistics for these analyses is standard procedure (Muthen & Muthen, 2006.).

Using ZIP growth models, linear and quadratic models were evaluated to find the best fit with the patterns in the raw items shown in Figure 3.1.2. For the linear model, the log-likelihood value was -1821.948 with 5 free parameters and a BIC value of 3672.659. The quadratic growth model had a log-likelihood value of -1797.392 with 7 free parameters and a BIC value of 3635.785. These fit statistics indicate that the quadratic growth model fit the data better. Additionally, Figure 3.1.5 illustrates that the estimated means from quadratic model closely map onto the observed values. The quadratic growth curve is u shaped where middle aged children report lowest levels of involvement while oldest children report the highest levels of romantic involvement. This quadratic growth pattern is consistent with the growth patterns suggested in the literature (Leaper, 1994; Leaper & K. J. Anderson, 1997)

The ZIP growth mixture modeling also enables researchers to explore variation in

developmental trajectories across individuals (B.O. Muthen, 2000; B.O. Muthen & Asparouhov, 2008; Nagin, 1999). In a series of models, I evaluated models that included up to four distinct latent classes to explore additional growth patterns in children's reports of romantic involvement. The statistical fit indices (Table 3.1.2) indicate that there is no substantial improvement in model fit beyond a single class model. Though the models with two and three classes provide interesting differentiation, the classes become prohibitively small and do not provide substantial fit improvement. Thus, a single growth curve solution for romantic involvement was selected as the best statistical and substantive model.

#### *Post Hoc Analysis*

The final analysis for this research question examined the links between the emergence of romantic interest and romantic involvement. This analysis was not hypothesized given the lack of precedent to build on and is purely a post-hoc examination of the association between these two outcome variables. Children's level of romantic interest may be a strong determinant of their levels of romantic involvement. How early or how much children think about things like holding hands and who they might marry might be indicative of how soon and how much they report romantic involvement like having crushes and actually holding hands as they age. In fact, the two outcomes showed significant positive correlations (Table 3.1.4).

In a single model, I first tried to regress the intercept and slope of children's romantic involvement on their latent class membership of romantic interest. With the

modeling and data constraints of this sample, the model was unable to converge. The structure of the data did not leave enough free parameters to identify the model resulting in untrustworthy standard errors.

In a second attempt to model the relationship between the two variables, I ran a ZIP growth model for romantic involvement with romantic interest as a time varying covariate. This model proved to be the superior method (Table 3.1.5). For all children regardless of age, there was a strong positive association between romantic interest and romantic involvement. Each one unit increase in romantic interest resulted in a higher frequency of one to two romantic involvement activities. Higher rates of romantic interest were associated with a dramatic increase in romantic involvement throughout childhood.

I also ran the ZIP growth model for romantic involvement that included a concurrent and lagged measurement of romantic interest. In this case, the level of romantic interest measured at age five was used to model romantic involvement both at age five and age six. This model showed similar results. The concurrent effects of romantic interest showed strong positive associations with romantic involvement, while even the lagged effects showed some evidence of impacting romantic involvement.

### *Summary of Findings*

The goal of Research Question I was to establish a baseline understanding of the emergence of romantic interest and involvement during childhood. Starting with 20 items, I used factor analysis and tests for measurement invariance to determine that two

independent but related factors, romantic interest and romantic involvement, best fit children's reports. The scale for romantic interest consisted of six items that dealt with how much children had thought of or desired the romantic activities. My analysis of growth over time for romantic interest suggested that this factor may not show developmental change. Rather, it seemed that children were best classified as either reporting high levels or low levels of romantic interest. Most children (75%) reported an average interest that corresponded to relatively low, stable levels of romantic interest. The remaining children (25%) were members of the class marked by consistently higher levels of romantic interest.

The factor for romantic involvement consisted of events and activities that children shared with the opposite sex, such as had a boy/girlfriend or kissed someone. Growth models for romantic involvement evidenced developmental growth as children matured. The growth model formed a u shaped pattern where reports of romantic involvement increased during late childhood. The dramatic increase occurred around age nine and ten. Each subsequent year showed an increase in romantic involvement peaking at 7 events at age 13. During middle to late childhood, children's reports of having a crush on someone, trying to sit next to or talk to someone, talking to friends about who is cute, and holding hands increased the most. These events are consistent with expectations regarding what romantic involvement may look like during this period. During middle childhood and into late childhood, children begin their romantic involvement with the opposite sex as evidenced through reports of passion, attraction, desire and a social

component where children disclose their feelings with friends. Children were least involved during middle childhood with the fewest romantic events at ages seven to nine, which is consistent with Leaper's findings (1994, 1997). Interestingly, the youngest children reported slightly more romantic involvement than those in middle childhood, but report moderately higher romantic involvement during early childhood.

Post-hoc analyses also suggested that levels of romantic interest were related to reports of romantic involvement. Children who reported higher levels of romantic interest also reported substantially more romantic involvement with the opposite sex. This held true over time as well; romantic interest impacted levels of romantic involvement up to a year later as well. For this project, subsequent analyses will build on these baseline models to explore variation in children's romantic interest and involvement trajectories. The objective of the remaining two research questions is to study how individual and family instability characteristics account for levels of romantic interest and romantic involvement growth patterns.

Tables 3.1.1 Factor Loadings For Romantic Interest And Involvement Items.

	Rotated Factor Loadings	
	1	2
Some kids get an excited feeling when they are with a girl/boy they like but other kids don't get this feeling	0.35 ***	0.29 **
Some kids spend a lot of time thinking about a girl/boy they like but other kids don't spend a lot of time thinking about a girl/boy they like	0.65 ***	0.07
Some kids have a special girl/boy they want to kiss but other kids don't have a special girl/boy they want to kiss	0.66 ***	0.13
Some kids your age feel they must have a girlfriend but other kids don't feel they need a girl/boyfriend	0.78 ***	0.00
Some kids spend a lot of time talking about a girl/boyfriend but other kids hardly ever talk about girl/boyfriends	0.64 ***	0.06
Some kids often dress for a girl/boy to like them but other kids hardly ever dress for a girl/boy to like them	0.74 ***	-0.02
Some kids want to hold hands with a girl/boy they like but other kids don't want to hold hands with a girl/boy	0.71 ***	0.14
Some kids think about who they might marry but other kids don't think about who they might marry	0.83 ***	-0.10
Do you talk to friends about who is cute in class?	0.02	0.50 ***
Have you ever teased a girl/boy because you like them?	-0.01	0.51 ***
Have you ever had a girl/boyfriend?	0.11	0.56 ***
Have you ever asked your friends to find out if a girl/boy likes you?	-0.03	0.65 ***
Have you ever tried to sit next to or talk to a girl/boy you liked?	0.03	0.74 ***
Have you ever sent a love letter to a girl/boy?	0.02	0.64 ***
Have you ever been kissed by a girl/boy?	-0.06	0.61 ***
Have you ever tried to kiss a girl/boy?	0.17 *	0.48 ***
Have you ever held hands with a girl/boy?	0.01	0.54 ***
Have you ever acted silly to get a girl/boy to notice you?	-0.12	0.63 ***
Have you ever had a crush on a girl/boy?	0.06	0.57 ***
Have other kids ever teased you for liking a girl/boy?	-0.10	0.54 ***

R<sup>2</sup> of factors = 0.723

Table 3.1.2 Fit Statistics For Growth Models Of Romantic Interest And Involvement

	Log-Likelihood Value	Free Paramters	BIC	LRT
ZIP Quadratic Model for Romantic Involvement				
1 Class	-1797.38	7	3635.05	-
2 Classes	-1766.48	11	3554.97	0.12
3 Classes	-1755.14	15	3596.56	0.36
Linear Model for Romantic Interest				
1 Class	-90.77	14	262.08	-
2 Classes	-60.02	17	217.83	0.00
3 Classes	-59.40	20	233.85	0.49

Table 3.1.3 Descriptive Statistics By Romantic Interest Latent Class Membership.

	Class 1 ( <i>N</i> = 236)	Class 2 ( <i>N</i> = 79)
Age of Mother in years	36.77 (6.69)	36.73 (6.42)
Age of child in years	8.26 (1.98)	8.54 (2.07)
Gender of child		
Male	0.47	0.49
Female	0.53	0.51
Race/Ethnicity		
Non-Hispanic White	0.64	0.62
Non-Hispanic Black	0.08	0.14
Hispanic	0.28	0.24
Mother's educational attainment @ baseline		
Less than HS grad	0.06	0.05
HS grad	0.18	0.23
Some college	0.36	0.42
College grad	0.40	0.30
Mother's household income @ baseline		
income below 20K	0.16	0.14
income below 40K	0.34	0.39
income below 60K	0.24	0.32
income above 60K	0.25	0.15
Health		
Mother's health @ baseline	1.78 (0.71)	1.76 (0.77)
Child's health @ baseline	1.28 (0.52)	1.27 (0.50)
Who suggested the divorce		
Mother	0.64	0.72
Father	0.27	0.19
Mutual	0.08	0.09
Custody arrangement @ baseline		
Mother sole	0.22	0.23
Joint	0.59	0.56
Other	0.02	0.03
Number of kids living with mom	2.11 (0.93)	1.99 (0.81)
Number of total marriages	1.3 (0.59)	1.41 (0.68)
Length of separation	14.37 (17.66)	14.84 (19.21)

Table 3.1.4 Correlation Across Age In Years For Romantic Interest And Involvement

	Romantic Involvement								
	Age 5	Age 6	Age 7	Age 8	Age 9	Age 10	Age 11	Age 12	Age 13
Romantic Interest									
Age 5	0.66 ***	0.54 ***	0.51 **	.	.	.	.	.	.
Age 6	0.56 ***	0.67 ***	0.40 ***	0.24	.	.	.	.	.
Age 7	0.41 *	0.38 ***	0.71 ***	0.49 ***	0.68 ***	.	.	.	.
Age 8	.	0.28	0.45 ***	0.65 ***	0.63 ***	0.62 **	.	.	.
Age 9	.	.	0.42 *	0.46 ***	0.62 ***	0.55 ***	0.25	.	.
Age 10	.	.	.	0.55 **	0.55 ***	0.69 ***	0.44 ***	0.51 **	.
Age 11	.	.	.	.	0.26	0.33 **	0.69 ***	0.52 ***	0.35
Age 12	.	.	.	.	.	0.41 *	0.50 ***	0.68 ***	0.65 ***
Age 13	.	.	.	.	.	.	0.43 *	0.53 **	0.80 ***

Note: \* p < .05; \*\* p < .01; \*\*\* p < .001.

Table 3.1.5 Time-Varying Concurrent And Lagged Effect Models Of Romantic Interest On Levels Of Romantic Involvement During Childhood.

	Model 1		Model 2	
	Parameter Estimate	SE	Parameter Estimate	SE
<i>Concurrent effects model</i>				
Concurrent effect age 5	2.04 ***	0.29	2.33 ***	0.31
Concurrent effect age 6	1.64 ***	0.20	1.43 ***	0.24
Concurrent effect age 7	1.54 ***	0.14	1.82 ***	0.24
Concurrent effect age 8	1.49 ***	0.15	1.47 ***	0.19
Concurrent effect age 9	1.40 ***	0.16	1.15 ***	0.19
Concurrent effect age 10	1.36 ***	0.13	1.41 ***	0.20
Concurrent effect age 11	1.59 ***	0.15	1.71 ***	0.17
Concurrent effect age 12	1.41 ***	0.16	1.17 ***	0.22
Concurrent effect age 13	1.35 ***	0.24	1.13 ***	0.29
<i>Lagged effects model</i>				
Lagged effect age 5			0.71 *	0.32
Lagged effect age 6			0.11	0.21
Lagged effect age 7			0.57 *	0.23
Lagged effect age 8			0.82 ***	0.19
Lagged effect age 9			0.40 †	0.22
Lagged effect age 10			0.25 †	0.15
Lagged effect age 11			0.62 **	0.24
Lagged effect age 12			0.51 *	0.26
Loglikelihood (# free parameters)	-1672.88 (16)		-1674.20 (24)	
Intercept	0.25		0.11	
Slope	0.05		0.02	
Quadratic Term	0.01		0.01	

Note: † p < .10\* p < .05; \*\* p < .01; \*\*\* p < .001.

Figure 3.1.1 Mean Values Of Romantic Interest Items And Scale By Age.

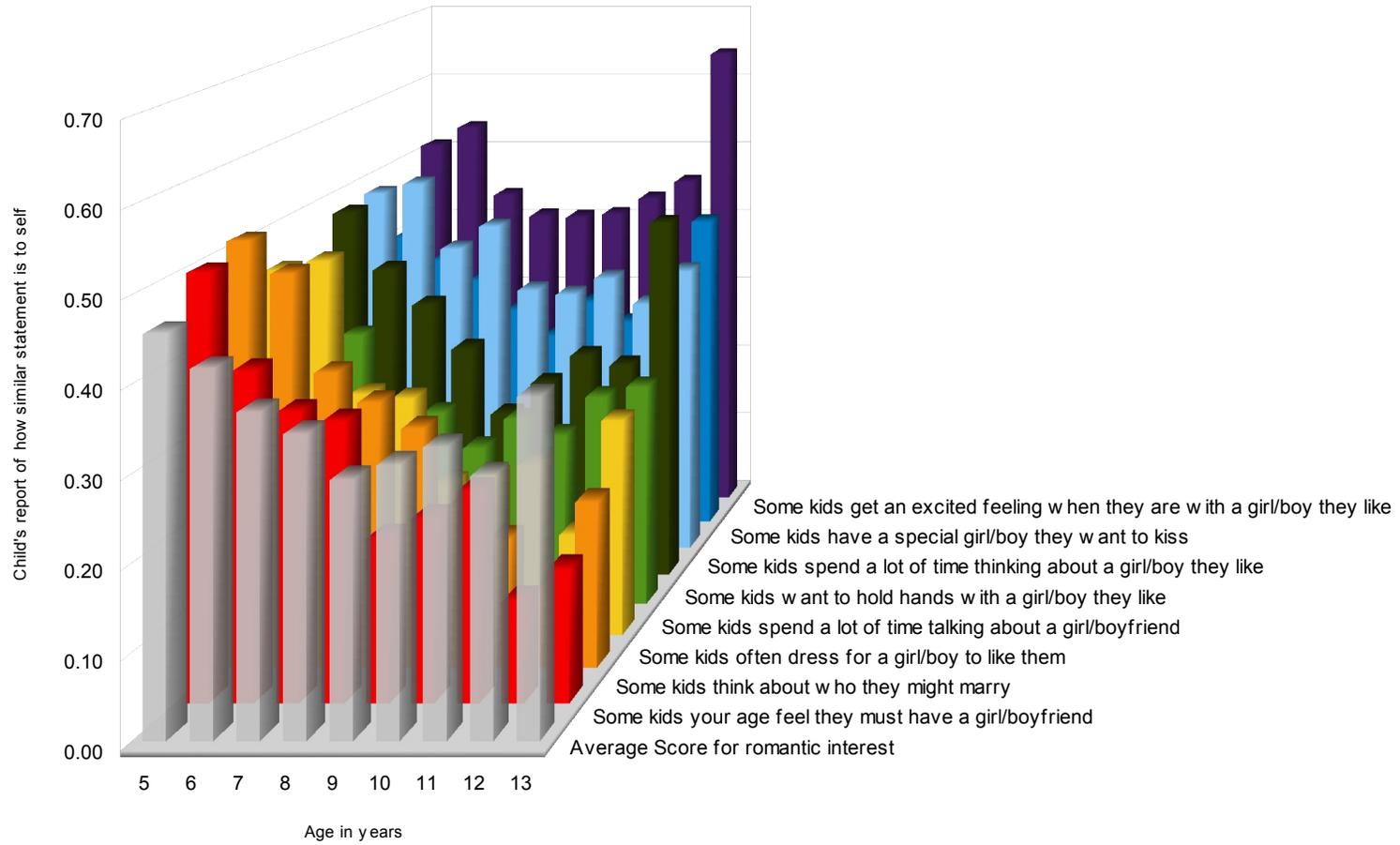


Figure 3.1.2 Mean Counts For Romantic Involvement Items By Age.

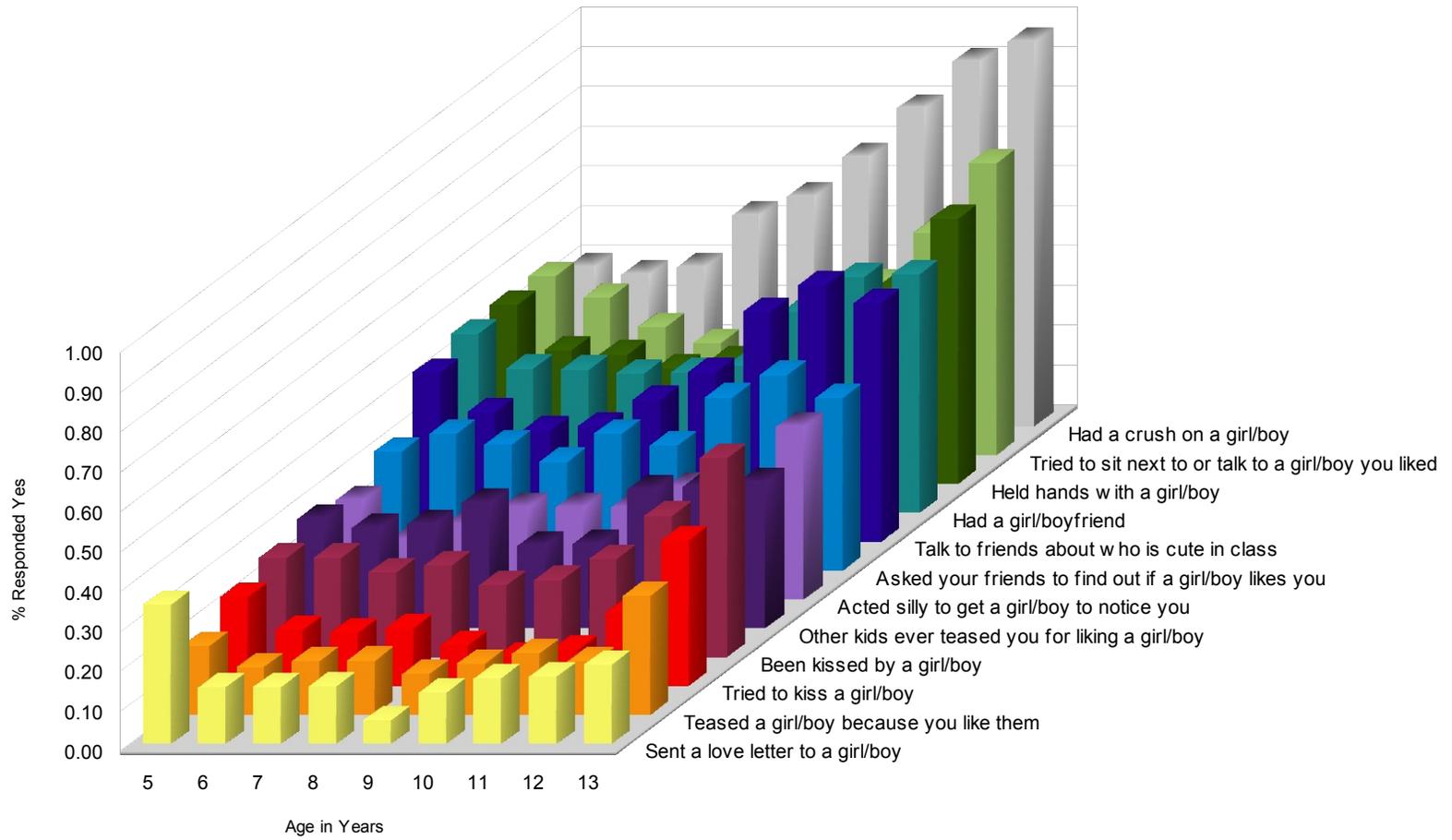


Figure 3.1.3 Mean Counts For Romantic Involvement Scale By Age

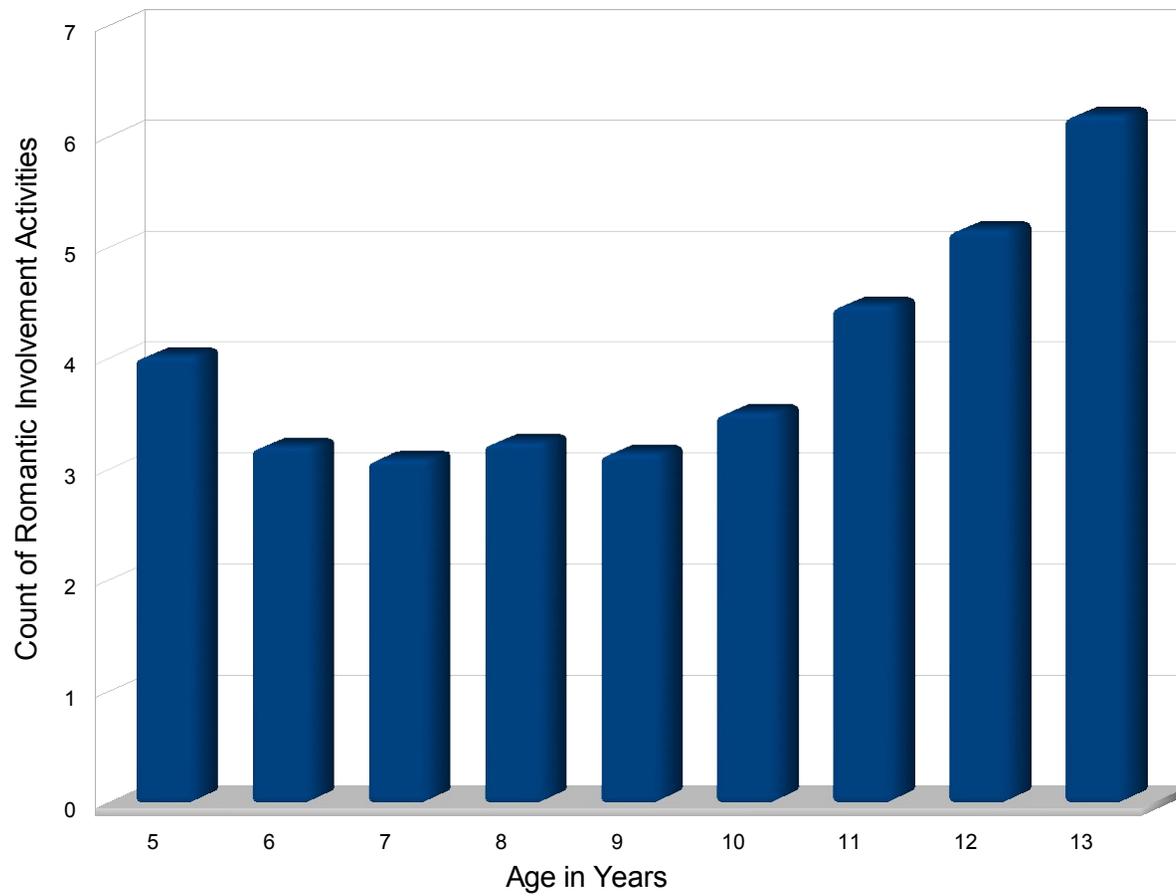


Figure 3.1.4 Linear Growth Model Of Observed And Estimated Values For Romantic Interest, High Interest Class (25%) And Low Interest Class (75%).

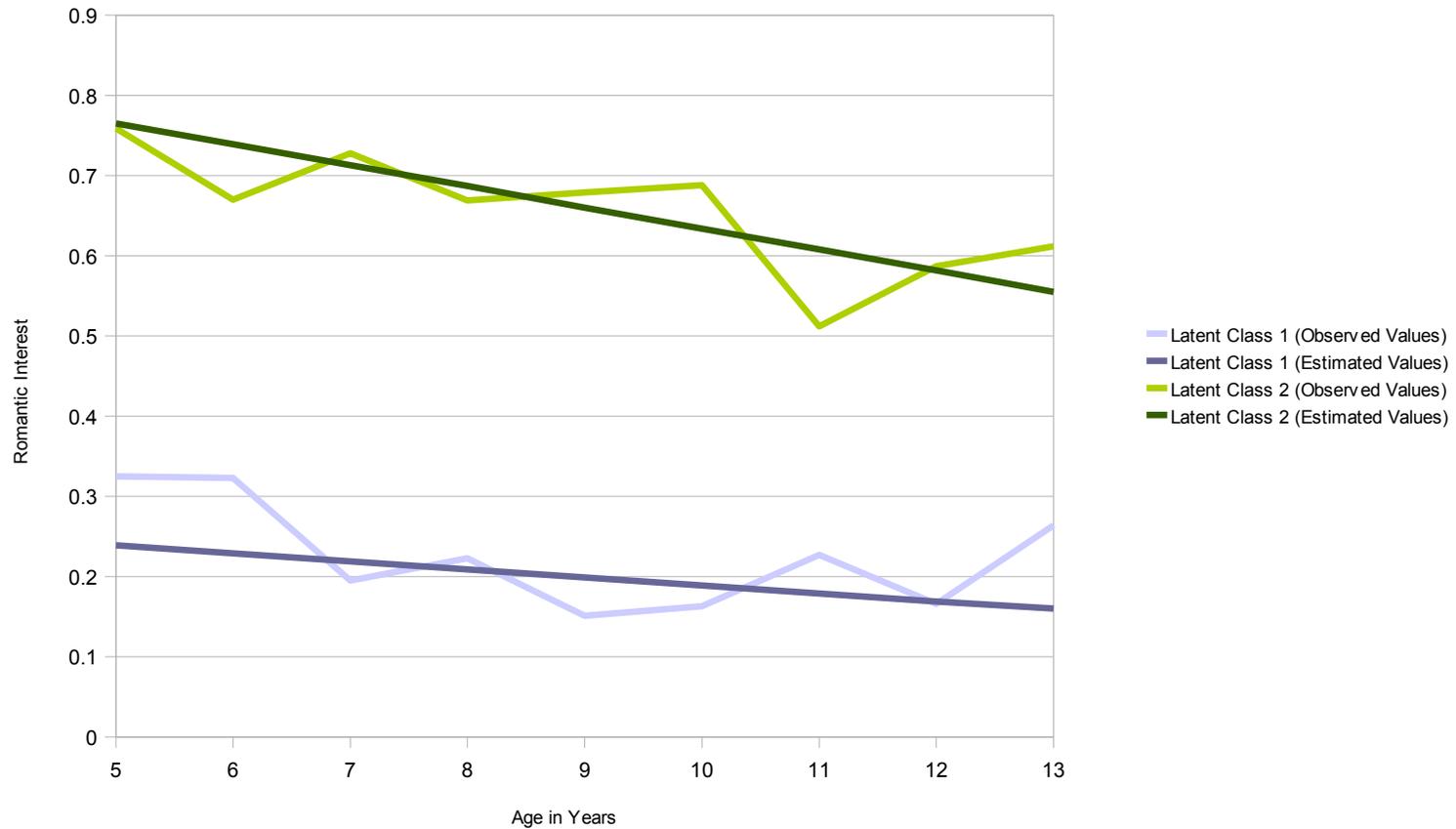
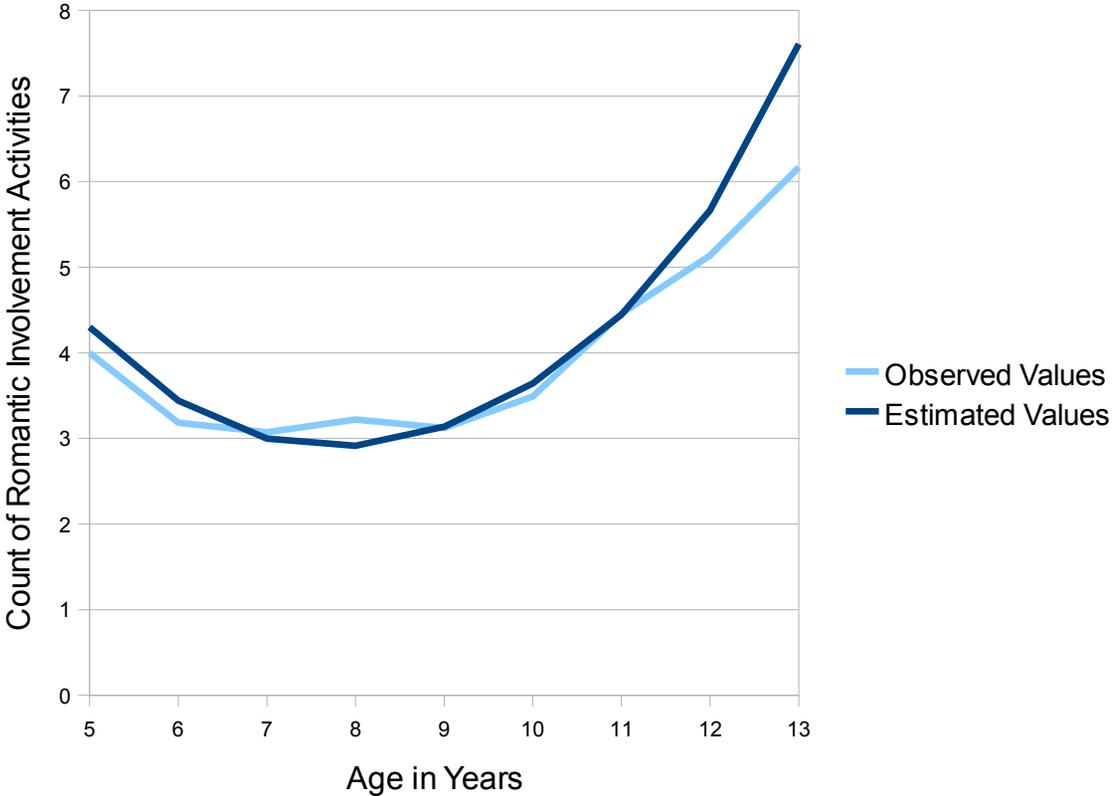


Figure 3.1.5 Quadratic ZIP Growth Model Of Observed And Estimated Values For Romantic Involvement.



## Research Question II

### *Descriptive Statistics*

The objective of second research question was to explore whether variation in romantic interest and involvement could be contributed to children's characteristics. I focus on demographic characteristics, including gender and race/ethnicity, as well as indicators of cognitive, social and pubertal development. These variables with descriptive statistics are listed in Table 3.2.1. Approximately half of the children were female (52%). Most were non-Hispanic white (64%). A quarter of the children were Hispanic and fewer than 10% were non-Hispanic black. Given the small number of non-Hispanic black children, caution must be taken when interpreting racial/ethnic differences presented later in this section.

Both indicators of cognitive development from the Woodcock Johnson Test of Achievement showed development growth as children aged. Children scored significantly higher on the reading and math tests at nearly each subsequent year. However, the indicator of social development, the Social Skills Rating Scale completed by the mother, did not show similar developmental growth. Levels of children's social development remained stable as they aged, suggesting this is more a measure of social skills rather than social development. The mean ranged from 2.32 (SD = 0.35) at age 7 to 2.50 at age 13 (SD = 0.37).

Maternal reports of children's pubertal development did increase with age. There was virtually no pubertal development during early childhood (ages 5-7). Mothers

indicated that pubertal development began around age 8 and accelerated through age 13. Levels of pubertal development showed significant increases as children aged. There were also significant differences in pubertal maturation by gender (Table 3.2.2). From age 8 to 13, girls have significantly higher levels of pubertal development than boys of the same age.

*Growth Modeling with Individual Time-Invariant and Time-Varying Covariates*

*Romantic Interest*

As previously described, children's romantic interest was best modeled through two latent classes, one marked by high interest and the other by low interest. Thus, the first step in modeling the impact of the time-invariant and variant covariates is to run a simple cross tabs to see how children in each class may differ on these variables. Table 3.2.3 lists the descriptive statistics for the demographic and developmental variables by latent class membership. There were no significant differences between children in the two classes.

The next step was to include the time-invariant and time-variant variables in the growth model of romantic interest. Each of the demographic and developmental variables are added to the growth model and the results are listed in Table 3.2.4. Recall that the output for models with time-invariant variables include two coefficients for each variable detailing the effect of the variable on the intercept, or the predicted value at age 5, and the slope, or the rate of change over time as children age. For example, Model 1 with gender includes coefficients that describe how being female impacts the initial level and

change in romantic involvement over time. For models with time-variant variables, the coefficients detail how the value of the variable at a given age impacts romantic interest and involvement at that same age. For example, Model 3 describes how at pubertal development impacts romantic interest at each category of age in years,

In Model 1 of Table 3.2.4, girls had significantly lower slopes than boys classified in the low romantic involvement class. For this class, girls had a steeper drop in romantic interest as they aged than boys. Beyond this link, there were generally no significant associations between gender or race/ethnicity and romantic interest in Models 1 and 2. Models 3 and 5 also revealed no significant associations between romantic interest and pubertal maturation or social skills. Each of the models for time-variant covariates were also run separately by gender. There were no significant differences by gender.

However, there are some significant links between cognitive development and romantic interest in Model 4. Higher letter-word scores were associated with a drop in romantic interest. Children's math abilities showed some evidence of a positive association with romantic interest. These effects are small though and do not suggest systematic effects on levels of romantic interest during childhood. These effects also did not significantly differ between the two latent classes.

### *Romantic Involvement*

The time-invariant and time-variant covariates were also evaluated for their impact on romantic involvement (Table 3.2.5). Models 1 and 2 test for the time-invariant variables of gender and race/ethnicity. There were no significant effects for either

variable. Similarly there were no significant associations between pubertal or cognitive development and romantic involvement in Model 3 and 4. Model 5 tested the link between social skills and romantic involvement. Social skills were significantly related to romantic involvement. Among younger children aged 5 to 8, higher levels of social skills are associated with greater romantic involvement.

Models 3 through 5 were also run separately by gender. There were no substantial differences by gender for cognitive development or social skills. There were however significant gender differences for pubertal development (Table 3.2.6). For girls, pubertal development was associated with significantly greater romantic involvement. For ages 8 to 11, higher pubertal development for girls was associated with increased romantic involvement. There were no significant associations for boys.

#### *Summary of Findings*

Though some of the coefficients were significant in the growth models included time-variant and time-invariant covariates, there was no conclusive evidence that the demographic or developmental variables explored in this section are meaningfully related to romantic interest. Similar patterns held for romantic involvement; gender, race/ethnicity, and cognitive development had no consistent associations with romantic involvement. This was contrary to expectations that children's characteristics would be closely related to their development of romantic interest.

Social skills were associated with romantic involvement however. Young children who were rated as having greater social skills were more likely to report higher levels of

romantic involvement. In fact, after accounting for variation due to differences in social skills, the growth model for romantic involvement resembled more of a positive linear growth trajectory rather than a u-shaped curve. High social skills during early childhood may be responsible for young children's elevated levels of romantic involvement. As expected, higher social functioning did result in higher levels of romantic involvement but only during early childhood.

Similarly, pubertal development had implications for romantic involvement once boys and girls were modeled separately. As expected, greater pubertal development was linked to greater romantic involvement for girls. There were no meaningful links between pubertal development and romantic involvement for boys, possibly due to relatively low levels of pubertal development found among boys in this sample.

Table 3.2.1 Descriptive Statistics For Children's Developmental Characteristics.

Age in years	Cognitive Development		Social Skills	Pubertal Maturation
	Letter Word Identification	Math Fluency		
5	14.41 (7.88)	2.22 (4.32)	2.35 (0.36)	1.19 (0.22)
6	25.60 (10.87) *	11.42 (10.76) *	2.34 (0.31)	1.20 (0.22)
7	38.60 (9.76) *	28.00 (13.58) *	2.32 (0.35)	1.22 (0.22)
8	45.58 (9.09) *	41.50 (15.05) *	2.36 (0.33)	1.30 (0.27) *
9	52.15 (7.70) *	55.22 (41.32) *	2.35 (0.35)	1.35 (0.31) *
10	55.64 (8.41) *	61.28 (19.21)	2.34 (0.36)	1.50 (0.48) *
11	58.94 (9.09)	71.69 (23.33) *	2.41 (0.37)	1.82 (0.62) *
12	63.24 (6.67) *	85.73 (23.91) *	2.48 (0.39)	2.28 (0.67) *
13	61.50 (14.47)	94.08 (31.96)	2.50 (0.37)	2.59 (0.65) *

Note: Mean (Standard Deviation); \* indicates significant difference from previous year at  $p < .05$ .

Table 3.2.2 Differences In Pubertal Develop By Gender.

Pubertal Development (by age)	All Children	Boys	Girls
5	1.19 (0.22)	1.22 (0.26)	1.17 (0.19)
6	1.20 (0.22)	1.22 (0.26)	1.18 (0.19)
7	1.22 (0.22)	1.16 (0.20)	1.26 (0.22)
8	1.30 (0.27)	1.21 (0.23)	1.38 (0.29) *
9	1.35 (0.31)	1.25 (0.25)	1.44 (0.34) *
10	1.50 (0.48)	1.26 (0.22)	1.75 (0.55) *
11	1.82 (0.62)	1.44 (0.31)	2.13 (0.63) *
12	2.28 (0.67)	1.84 (0.49)	2.68 (0.56) *
13	2.59 (0.65)	2.18 (0.62)	2.93 (0.46) *

Note: Mean (Standard Deviation); \* indicate a significant difference between girls and boys' pubertal development at  $p < .05$  level

Table 3.2.3 Descriptive Statistics By Romantic Interest Latent Class Membership.

	Low Romantic Interest (75%) Mean (SD)	High Romantic Interest (25%) Mean (SD)
Gender		
Female	0.53	0.51
Male	0.47	0.49
Race/Ethnicity		
non-Hispanic white	0.64	0.62
non-Hispanic black	0.08	0.14
Hispanic	0.28	0.24
Social Skills (by age)		
5	2.34 (0.35)	2.38 (0.40)
6	2.31 (0.30)	2.44 (0.35)
7	2.31 (0.34)	2.34 (0.36)
8	2.36 (0.33)	2.39 (0.34)
9	2.32 (0.37)	2.42 (0.25)
10	2.32 (0.37)	2.39 (0.34)
11	2.43 (0.38)	2.34 (0.37)
12	2.49 (0.38)	2.45 (0.43)
13	2.55 (0.38)	2.41 (0.35)
Cognitive Development (by age)		
Letter word identification		
5	15.23 (8.48)	12.67 (4.85)
6	26.43 (11.46)	23.94 (9.90)
7	39.68 (9.59)	35.73 (9.44)
8	46.27 (9.25)	44.23 (9.42)
9	52.32 (7.78)	51.14 (7.91)
10	56.04 (8.36)	54.96 (7.87)
11	59.92 (7.07)	57.00 (12.39)
12	62.95 (6.67)	63.60 (6.30)
13	62.80 (12.70)	60.30 (15.86)
Math fluency		
5	2.55 (4.72)	1.33 (2.83)
6	11.39 (10.99)	12.39 (10.51)
7	29.19 (12.76)	25.03 (14.97)
8	42.94 (15.37)	54.07 (92.27)
9	56.31 (45.44)	52.18 (13.58)
10	61.81 (19.81)	60.00 (16.64)
11	75.23 (23.91)	66.04 (25.38)
12	87.41 (24.02)	77.79 (24.02)
13	99.65 (29.70)	88.50 (34.36)
Pubertal Development (by age)		
5	1.16 (0.23)	1.27 (0.17)
6	1.20 (0.22)	1.17 (0.22)
7	1.21 (0.23)	1.25 (0.20)
8	1.28 (0.26)	1.36 (0.30)
9	1.33 (0.29)	1.43 (0.38)
10	1.46 (0.41)	1.64 (0.66)
11	1.83 (0.62)	1.83 (0.61)
12	2.27 (0.71)	2.38 (0.59)
13	2.53 (0.66)	2.72 (0.63)

Table 3.2.4 Time-Invariant And Time-Variant Models Of Children's Characteristics On Levels Of Romantic Interest During Childhood.

	Model 1				Model 2			
	Low romantic interest		High romantic interest		Low romantic interest		High romantic interest	
	Parame	SE	Parame	SE	Parame	SE	Parameter	SE
<i>Time-invariant variables</i>								
Gender (Male)								
Female								
Intercept	0.07	0.05	-0.08	0.09				
Slope	-0.02 *	0.01	0.00	0.02				
Race/Ethnicity (non-Hispanic White)								
non-Hispanic Black								
Intercept					0.16 †	0.09	0.21	0.13
Slope					-0.01	0.02	-0.01	0.02
Hispanic								
Intercept					-0.05	0.07	-0.05	0.15
Slope					0.01	0.01	0.03	0.02
<i>Pubertal maturation concurrent effects model</i>								
Age 5								
Age 6								
Age 7								
Age 8								
Age 9								
Age 10								
Age 11								
Age 12								
Age 13								
<i>Cognitive development concurrent effects model</i>								
Letter Word Score								
Age 5								
Age 6								
Age 7								
Age 8								
Age 9								
Age 10								
Age 11								
Age 12								
Age 13								
Math Fluency								
Age 5								
Age 6								
Age 7								
Age 8								
Age 9								
Age 10								
Age 11								
Age 12								
Age 13								
<i>Social skills concurrent effects model</i>								
Age 5								
Age 6								
Age 7								
Age 8								
Age 9								
Age 10								
Age 11								
Age 12								
Age 13								
Loglikelihood (# free parameter)								
	-54.56 (21)				-50.99 (25)			
Intercept	0.24		0.78		0.25		0.76	
Slope	-0.01		-0.03		-0.01		-0.03	
N	236		79		228		87	

Note: † p < .10; \* p < .05; \*\* p < .01; \*\*\* p < .001.

Table 3.2.4 (Continued)

Model 3				Model 4				Model 5			
Low romantic interest		High romantic interest		Low romantic interest		High romantic interest		Low romantic interest		High romantic interest	
Paramet	SE	Paramet	SE	Paramete	SE	Paramete	SE	Paramet	SE	Paramet	SE
0.09	0.17	-0.01	0.23								
0.10	0.12	-0.06	0.16								
-0.04	0.08	0.10	0.13								
0.00	0.06	0.00	0.09								
-0.05	0.04	0.04	0.06								
-0.04	0.03	0.04	0.05								
0.01	0.03	-0.03	0.04								
-0.03	0.03	0.01	0.05								
0.02	0.04	0.03	0.05								
				0.00	0.01	-0.01	0.01				
				0.00	0.00	-0.01	0.01				
				-0.01 *	0.00	0.00	0.01				
				0.00	0.00	0.00	0.00				
				0.00	0.00	0.01	0.01				
				0.00	0.00	-0.01 *	0.01				
				0.00 †	0.00	-0.01 *	0.01				
				0.00	0.00	0.00	0.00				
				0.01	0.01	-0.01	0.00				
				0.01	0.01	0.00	0.03				
				-0.01 *	0.00	0.01	0.01				
				0.00	0.00	0.00	0.00				
				0.00	0.00	-0.01	0.01				
				0.00 *	0.00	-0.01	0.01				
				0.00	0.00	0.01 *	0.00				
				0.00 *	0.00	0.00	0.00				
				0.00	0.00	0.00 **	0.00				
				0.00	0.00	0.00	0.00				
								0.07	0.07	0.22	0.14
								0.07	0.06	0.14	0.11
								0.00	0.04	0.19 *	0.09
								0.02	0.03	0.10	0.08
								-0.01	0.03	0.09	0.07
								-0.01	0.03	0.08	0.06
								0.03	0.04	-0.03	0.07
								0.00	0.05	-0.02	0.07
								0.05	0.06	-0.03	0.11
-38.49 (35)				-20.57 (53)				-31.04 (35)			
0.24		0.70		0.40		0.76		0.20		0.21	
0.00		-0.02		-0.03		0.02		0.00		0.06	
238		77		243		72		240		75	

Table 3.2.5 Time-Invariant And Time-Variant Models Of Children's Characteristics On Levels Of Romantic Involvement During Childhood.

	Model 1		Model 2	
	Parameter Estimate	SE	Parameter Estimate	SE
<i>Time-invariant variables</i>				
Gender (Male)				
Female				
Intercept	0.06	0.18		
Slope	-0.03	0.03		
Race/Ethnicity (non-Hispanic White)				
non-Hispanic Black				
Intercept			0.29	0.30
Slope			0.01	0.05
Hispanic				
Intercept			-0.38 †	0.21
Slope			0.08 †	0.04
<i>Pubertal maturation concurrent effects model</i>				
Age 5				
Age 6				
Age 7				
Age 8				
Age 9				
Age 10				
Age 11				
Age 12				
Age 13				
<i>Cognitive development concurrent effects model</i>				
Letter Word Score				
Age 5				
Age 6				
Age 7				
Age 8				
Age 9				
Age 10				
Age 11				
Age 12				
Age 13				
Math Fluency				
Age 5				
Age 6				
Age 7				
Age 8				
Age 9				
Age 10				
Age 11				
Age 12				
Age 13				
<i>Social skills concurrent effects model</i>				
Age 5				
Age 6				
Age 7				
Age 8				
Age 9				
Age 10				
Age 11				
Age 12				
Age 13				
Loglikelihood (# free params)	-1796.95 (9)		-1792.84 (11)	
Intercept	1.29		1.33	
Slope	-0.20		-0.21	
Quadratic Term	0.03		0.03	

Note: † p < .10; \* p < .05; \*\* p < .01; \*\*\* p < .001.

Table 3.2.5 (Continued).

Model 3		Model 4		Model 5	
Parameter Estimate	SE	Parameter Estimate	SE	Parameter Estimate	SE
-0.01	0.53				
0.01	0.37				
0.03	0.24				
0.09	0.16				
0.08	0.14				
0.04	0.10				
0.06	0.08				
-0.01	0.08				
-0.06	0.12				
		-0.04 †	0.02		
		-0.01	0.01		
		-0.02 *	0.01		
		0.00	0.01		
		0.00	0.01		
		0.00	0.01		
		0.00	0.01		
		0.00	0.01		
		0.01	0.01		
		0.02	0.03		
		-0.02	0.02		
		0.01	0.01		
		0.00 **	0.00		
		0.00	0.00		
		0.00	0.01		
		0.00	0.00		
		0.00	0.00		
		0.00	0.00		
				0.72 *	0.31
				0.52 **	0.19
				0.41 ***	0.14
				0.32 **	0.12
				0.21 †	0.13
				0.14	0.13
				0.12	0.14
				0.05	0.17
				0.01	0.26
-1798.38 (16)		-1789.796 (25)		-1792.77 (16)	
1.39		1.81		-0.31	
-0.30		-0.24		0.15	
0.04		0.02		0.01	

Table 3.2.6 Time-Variant Models Of Pubertal Development By Gender On Levels Of Romantic Involvement During Childhood.

	Girls		Boys	
	Parameter Estimate	SE	Parameter Estimate	SE
<i>Pubertal maturation concurrent effects model</i>				
Age 5	0.72	0.64	-0.71	0.73
Age 6	0.49	0.44	-0.56	0.47
Age 7	0.29	0.28	-0.41	0.28
Age 8	0.29 †	0.18	-0.30	0.21
Age 9	0.26 *	0.14	-0.27	0.23
Age 10	0.19 *	0.08	-0.15	0.22
Age 11	0.22 *	0.09	0.03	0.16
Age 12	0.22	0.15	0.00	0.14
Age 13	0.25	0.24	0.03	0.20
Loglikelihood (# free parameters)	-2007.62 (29)			
Intercept	0.45		2.17	
Slope	0.00		-0.39	
Quadratic Term	0.00		0.04	
<i>N</i>	165		150	

Note: †  $p < .10$ ; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

### Research Question III

#### *Descriptive Statistics*

As the main objective of this project, this research question focuses on how family instability measured through maternal repartnering may influence children's romantic interest and involvement. As a reminder, all of the households that participated in the Baseline assessment had filed for divorce within the past 120 days, indicating a recent attempt to legally end the marriage. On average, the focal marriage had lasted almost ten years. For over three-quarters of the households, this represented the first divorce experienced by mothers. Most households reported marital separation occurred within the past seven months. However, the range of separation length includes parents who have not yet physically separated to parents who have been separated for over eight years, thus the opportunity for repartnering varied widely between families.

Table 3.3.1 presents the frequency of maternal repartnering transitions prior to each yearly assessment. Prior to the Baseline assessment, nearly half of the mothers reported a casual dating relationship and one third reported a serious dating relationship. Approximately one-quarter of the mothers reported a sleepover with a romantic partner had occurred while the child was at the house. There were few instances of cohabitation, remarriage, and break-ups. The largest increases in repartnering behavior occurred during the first 12 months after filing for divorce. Mothers remained romantically active during the last year of participation in the study though involvement patterns changed slightly. Rates of casual dating and sleepovers showed substantial decreases while involvement in

cohabitation, serious dating, and remarriage remained high. This suggests that mothers' repartnering shifted away from more casual forms of relationships to more formal romantic relationships over time. On average children were exposed to 4 to 5 repartnering transitions over the course of the two years following divorce.

Maternal repartnering attitudes did not show much change between the assessments however. Mothers' efforts to repartner and reinvent herself following divorce showed no change across the two year period. Mothers did report a greater focus on their romantic lives at the 12 and 24 month assessments. This did not effect the amount of focus they placed on the needs of their children but indicated they were experiencing an increasing desire to repartner.

The maternal repartnering behaviors and attitudes were also compared by child age for any differences. There was no substantial variation in maternal repartnering attitudes (Table 3.3.2) or behaviors (Table 3.3.3) depending on the child's age. There was variation in repartnering behaviors for mothers of very young children (age 5) though. These mothers were least likely to report cohabitation, remarriage, and breakups. It is possible that for this group of children, there is simply less opportunity for mothers to repartner. The youngest age group includes only information from the Baseline assessment. For example, age 7 children include children from the Baseline, 12 and 24 month assessments. This pattern will be explored in later post-hoc analyses.

*Growth Modeling with Family Instability Time-invariant and Time-varying Covariates*

*Romantic Interest*

Indicators of maternal repartnering attitudes were added to the baseline growth model of romantic interest (Table 3.3.4). There was some evidence that mothers' repartnering and reinvention efforts were associated with small increases in children's romantic interest, regardless of whether children are classified as having high or low romantic interest. However, these effects are small and did not exist across most ages.

There were more meaningful associations between role strain and romantic interest. For children who were categorized as reporting low romantic involvement, higher levels of focusing on both the child's needs and the mother's own romantic needs were associated with increases in romantic interest. Conversely, for children classified as having high romantic interest, higher levels of focusing on the mother's romantic needs was associated with decreased romantic interest during early childhood and increased romantic interest during middle childhood.

The impact of maternal repartnering behaviors on romantic interest was also explored (Table 3.3.5). Though there are some significant coefficients, no meaningful pattern emerged from these analyses. Neither the dummy variables for specific types of maternal romantic involvement nor the cumulative measure of romantic transitions revealed consistent effects on children's romantic interest. These results provide no evidence that maternal repartnering behaviors impact children's romantic interest.

### *Romantic Involvement*

Maternal repartnering attitudes and behaviors were also included in growth models of romantic involvement. Unfortunately, virtually none of these indicators were meaningfully related to children's romantic involvement (Tables 3.3.6 and 3.3.7). Several of the coefficients in the various models were significant yet yielded no conclusive evidence that romantic involvement was effected by these variables.

### *Post Hoc Analyses*

Several of the models for both romantic interest and involvement included a significant effect of the time-varying covariates only at age 5. As described in the section for descriptive statistics, children age 5 is a unique group of children in this sample as this includes only assessments from the original Baseline interview, unlike other ages such as 6 which can include assessments from both the Baseline and 12 month interviews. The age 5 children represent assessments and reactions immediately following filing for divorce. It is possible that for this group of children, the recency of the divorce is not confounded by measurements from children of the same age from later assessments, with more time to recover from the divorce.

To explore if the recency of filing for divorce is substantially changing maternal repartnering behaviors and attitudes, I tried controlling for indicators of a short separation period, mother's only marriage, and no dating at Baseline to capture instances where the divorce and any subsequent repartnering would represent a dramatic transition for the child. When these were included as time-invariant covariates both as dummy variables

and as an index, they did not change the results for either outcome. From these analyses, I can conclude that the age 5 children do not represent a pattern in the data due to recently filing for divorce but random error possibly due to a small sample size ( $N = 45$ ).

### *Summary of Findings*

One of the primary objectives of this project was to explore the relationship between maternal repartnering and the emergence romantic interest and involvement. Previous literature led me to expect that children's exposure to instability through mothers' repartnering behaviors and attitudes would have implications for their romantic interest and involvement. These results do provide evidence that repartnering attitudes, particularly regarding how mothers balance their child's needs with their own romantic needs, impact children's romantic interest. For children who report lower levels of romantic interest, mothers who are sensitive to both their own and children's needs are likely to see increases in their children's romantic interest. Similarly among children who report higher levels of romantic interest, having mothers who place more emphasis on their own romantic needs is associated with increases in children's romantic interest. For the young children who report high levels of romantic interest, mothers focusing on her romantic needs was associated with decreases in children's romantic interests. For most children, a mother's increased focus on her romantic life is associated with a increase in a child's interest in his or her romantic life as well. This is consistent with the idea that a child's greater awareness of and emphasis on the romantic domain has implications for the child's own romantic ideas.

There was no evidence however that any of the indicators of maternal repartnering behaviors were meaningfully associated with children's romantic interest or involvement. Although I expected maternal repartnering would impact children's interest and involvement in several different ways, none of these pathways proved to be helpful in describing variation in children's romantic outcomes. Similarly I expected that children may react to the divorce by pulling away from romances after being exposed to the pain that accompanies the dissolution of romantic relationships. The post hoc analyses described above did not provide support for this idea. There was no evidence that a greater shock from filing from divorce, specifically in cases of short separation, no previous repartnering, and the mother's first and only marriage, was associated with children's romantic interest and involvement.

Table 3.3.1 Descriptive Statistics For Maternal Repartnering Behaviors And Attitudes

Footnote Needed From Page 88...

	Baseline Assessment	12 Month Assessment	24 Month Assessment	% children ever exposed to:
	Mean (SD)	Mean (SD)	Mean (SD)	
<i>Repartnering Behaviors</i>				
Casual Dating	0.45 (0.50) <sup>a</sup>	0.62 (0.49) <sup>ab</sup>	0.49 (0.50) <sup>b</sup>	0.74 (0.44)
Serious Dating	0.37 (0.48) <sup>ab</sup>	0.62 (0.49) <sup>a</sup>	0.66 (0.48) <sup>b</sup>	0.69 (0.46)
Sleep Overs	0.27 (0.45) <sup>a</sup>	0.24 (0.43) <sup>b</sup>	0.13 (0.34) <sup>ab</sup>	0.46 (0.50)
Cohabitation	0.12 (0.32) <sup>ab</sup>	0.23 (0.42) <sup>a</sup>	0.26 (0.44) <sup>b</sup>	0.30 (0.46)
Engaged/Remarried	0.04 (0.21) <sup>a</sup>	0.15 (0.35) <sup>ab</sup>	0.11 (0.31) <sup>a</sup>	0.21 (0.41)
Break-up	0.07 (0.26)	0.37 (0.48) <sup>a</sup>	0.28 (0.45) <sup>a</sup>	0.43 (0.50)
Cumulative Transitions	1.32 (1.49) <sup>ab</sup>	2.22 (1.34) <sup>a</sup>	1.92 (1.21) <sup>b</sup>	4.57 (3.08)
<i>Repartnering Attitudes</i>				
Repartnering efforts	2.82 (2.61)	2.66 (3.06)	2.37 (3.04)	-
Reinvention efforts	6.25 (3.54)	6.26 (2.95)	5.79 (3.00)	-
Role strain: Child focus	3.51 (0.62)	3.60 (0.62)	3.53 (0.68)	-
Role strain: Romantic focus	2.44 (0.41) <sup>ab</sup>	2.55 (0.41) <sup>a</sup>	2.58 (0.48) <sup>b</sup>	-

Table 3.3.2 Descriptive Statistics For Maternal Repartnering Attitudes By Age

Age in years	Repartnering	Reinvention	Role strain	
	Efforts	Efforts	Child Focus	Romantic focus
5	2.73 (2.15)	5.93 (3.31)	3.63 (0.66)	2.44 (0.36)
6	2.74 (2.92)	6.57 (3.27)	3.49 (0.64)	2.45 (0.44)
7	2.47 (3.08)	6.32 (3.23)	3.56 (0.62)	2.55 (0.44)
8	2.68 (2.82)	6.28 (3.35)	3.51 (0.60)	2.50 (0.44)
9	2.24 (2.68)	5.79 (3.10)	3.56 (0.64)	2.50 (0.45)
10	2.60 (2.83)	6.02 (3.18)	3.51 (0.61)	2.54 (0.46)
11	2.63 (2.96)	6.13 (3.33)	3.50 (0.65)	2.48 (0.44)
12	3.52 (3.27)	5.67 (3.01)	3.59 (0.65)	2.64 (0.40)
13	2.77 (3.00)	6.10 (2.78)	3.76 (0.81)	2.50 (0.40)

Note: Letter indicates significant difference between ages at  $p < .05$  and \* indicates significant difference from all ages at  $p < .05$ .

Table 3.3.3 Descriptive Statistics For Maternal Repartnering Behaviors By Age

	Casual Dating	Serious Dating	Sleep Over	Cohabitation	Engaged Remarried	Break-up	Transitions in previous year
Age in years							
5	0.63 (0.49)	0.45 (0.50)	0.26 (0.45)	0.05 (0.23) <sup>a b c</sup>	0.00 (0.00) *	0.03 (0.16) *	1.42 (1.03)
6	0.51 (0.50)	0.59 (0.50)	0.32 (0.47) <sup>a b</sup>	0.16 (0.37)	0.10 (0.30)	0.17 (0.38)	1.84 (1.40)
7	0.45 (0.50)	0.60 (0.49)	0.23 (0.42)	0.26 (0.44) <sup>a d e</sup>	0.12 (0.32)	0.21 (0.41)	1.87 (1.48)
8	0.56 (0.50)	0.50 (0.50)	0.19 (0.39)	0.20 (0.40)	0.09 (0.29)	0.25 (0.43)	1.79 (1.45)
9	0.43 (0.50)	0.48 (0.50)	0.24 (0.43)	0.24 (0.43) <sup>b</sup>	0.11 (0.31)	0.18 (0.39)	1.68 (1.56)
10	0.40 (0.49)	0.45 (0.50)	0.11 (0.32) <sup>a</sup>	0.21 (0.41) <sup>c</sup>	0.08 (0.28)	0.23 (0.42)	1.48 (1.42)
11	0.46 (0.50)	0.45 (0.50)	0.12 (0.33) <sup>b</sup>	0.11 (0.32) <sup>d</sup>	0.07 (0.26)	0.27 (0.45)	1.48 (1.35)
12	0.53 (0.50)	0.47 (0.50)	0.16 (0.37)	0.10 (0.31) <sup>e</sup>	0.10 (0.31)	0.28 (0.45)	1.65 (1.35)
13	0.53 (0.51)	0.57 (0.50)	0.13 (0.35)	0.20 (0.41)	0.07 (0.25)	0.30 (0.47)	1.80 (1.24)

Note: Letter indicates significant difference between ages at  $p < .05$  and \* indicates significant difference from all ages at  $p < .05$ .

Table 3.3.4 Time-Variant Models Of Maternal Repartnering Characteristics On Levels Of Romantic Interest During Childhood: Repartnering Attitudes

	Model 1				Model 2				Model 3			
	Low Romantic Interest		High Romantic Interest		Low Romantic Interest		High Romantic Interest		Low Romantic Interest		High Romantic Interest	
	Parameter	SE	Parameter	SE	Parameter	SE	Parameter	SE	Parameter	SE	Parameter	SE
<i>Repartnering efforts concurrent effects model</i>												
Age 5	0.02	0.02	0.00	0.04								
Age 6	0.03 **	0.01	-0.03	0.02								
Age 7	0.00	0.01	0.00	0.01								
Age 8	0.01	0.01	-0.01	0.02								
Age 9	-0.01	0.01	-0.01	0.02								
Age 10	0.00	0.01	0.02 *	0.01								
Age 11	0.02 *	0.01	-0.02	0.02								
Age 12	-0.01	0.01	0.01	0.01								
Age 13	0.02 †	0.02	0.01	0.01								
<i>Reinvention efforts concurrent effects model</i>												
Age 5					0.02	0.01	0.00	0.02				
Age 6					0.02 *	0.01	-0.02	0.02				
Age 7					0.00	0.01	0.01	0.01				
Age 8					0.00	0.01	0.00	0.01				
Age 9					0.00	0.00	0.00	0.01				
Age 10					0.00	0.00	0.01 *	0.01				
Age 11					0.02 *	0.01	-0.01	0.01				
Age 12					0.01	0.01	0.01	0.01				
Age 13					0.03 *	0.01	0.01	0.01				
<i>Maternal focus concurrent effects model</i>												
<i>Child focus</i>												
Age 5									-0.11	0.07	0.16	0.09
Age 6									0.02	0.05	0.05	0.07
Age 7									-0.03	0.03	0.09 **	0.03
Age 8									0.03	0.04	0.10 †	0.06
Age 9									-0.01	0.03	0.06	0.04
Age 10									0.03	0.02	-0.02	0.02
Age 11									0.12 ***	0.04	-0.14 ***	0.03
Age 12									0.14 ***	0.04	-0.07	0.07
Age 13									0.08	0.12	0.15	0.14
<i>Repartnering focus</i>												
Age 5									0.12	0.11	-0.30 **	0.11
Age 6									-0.02	0.08	-0.15	0.10
Age 7									0.02	0.03	-0.12 **	0.04
Age 8									0.02	0.06	-0.17 *	0.09
Age 9									0.09 *	0.05	-0.12 *	0.06
Age 10									0.06	0.04	0.11 **	0.04
Age 11									0.04	0.07	0.21 ***	0.05
Age 12									0.05	0.06	0.13	0.11
Age 13									0.27 *	0.12	-0.21	0.19
Loglikelihood (# free parameters)	-42.58 (35)				-35.10 (25)				-13.02 (53)			
Intercept	0.22		0.79		0.24		0.79		0.44		0.89	
Slope	-0.01		-0.03		-0.02		-0.03		-0.12		-0.09	
N	238				240				219			
	77				75				96			

Note: † p < .10; \* p < .05; \*\* p < .01; \*\*\* p < .001.

Table 3.3.5 Time-Variant Models Of Maternal Repartnering Characteristics On Levels Of Romantic Interest During Childhood: Romantic Transitions.

	Model 1				Model 2			
	Low Romantic Interest		High Romantic Interest		Low Romantic Interest		High Romantic Interest	
	Parameter	SE	Parameter	SE	Parameter	SE	Parameter	SE
<i>Serious dating</i>								
Age 5	0.16	0.14	-0.22	0.37				
Age 6	0.00	0.09	-0.27	0.17				
Age 7	-0.07	0.04	-0.02	0.11				
Age 8	-0.07 †	0.04	0.03	0.12				
Age 9	-0.06	0.04	-0.12	0.08				
Age 10	-0.01	0.05	0.11	0.08				
Age 11	0.07	0.05	-0.16 †	0.10				
Age 12	0.06	0.06	0.05	0.05				
Age 13	0.20 *	0.08	0.14	0.10				
<i>Sleep over</i>								
Age 5	-0.27 †	0.14	0.33	0.37				
Age 6	0.11	0.10	-0.33 **	0.12				
Age 7	0.06	0.08	-0.02	0.11				
Age 8	0.05	0.06	-0.15	0.22				
Age 9	0.03	0.07	0.18 †	0.09				
Age 10	0.01	0.07	0.18	0.18				
Age 11	-0.13 †	0.07	0.02	0.08				
Age 12	0.03	0.07	-0.07	0.09				
Age 13	-0.14	0.13	0.00	0.09				
<i>Cohabitation</i>								
Age 5	0.60 ***	0.14	-0.80 ***	0.06				
Age 6	0.14	0.11	0.34 *	0.16				
Age 7	0.04	0.10	-0.05	0.11				
Age 8	0.10	0.07	-0.02	0.20				
Age 9	0.00	0.07	-0.07	0.09				
Age 10	-0.02	0.07	-0.26	0.23				
Age 11	0.03	0.07	-0.09	0.09				
Age 12	-0.06	0.09	-0.16 *	0.08				
Age 13	-0.05	0.16	-0.46 **	0.17				
<i>Cummulative number of repartnering transitions</i>								
Age 5					0.03	0.04	0.01	0.05
Age 6					0.03	0.03	-0.04	0.07
Age 7					-0.01	0.01	0.00	0.04
Age 8					0.01	0.02	-0.02	0.04
Age 9					-0.01	0.01	-0.01	0.02
Age 10					-0.01	0.01	0.03	0.02
Age 11					0.02	0.02	-0.07 ***	0.02
Age 12					0.02	0.01	-0.01	0.03
Age 13					0.05 †	0.03	0.00	0.04
Loglikelihood (# free parameters)	-21.97 (71)				-43.01 (35)			
Intercept	0.26		0.80		0.25		0.77	
Slope	-0.02		-0.03		-0.01		-0.02	
N	232		83		238		77	

Note: † p < .10; \* p < .05; \*\* p < .01; \*\*\* p < .001.

Table 3.3.6 Time-Variant Models Of Maternal Repartnering Characteristics On Levels Of Romantic Involvement During Childhood: Repartnering Attitudes.

	Model 1		Model 2		Model 3	
	Parameter	SE	Parameter	SE	Parameter	SE
<i>Repartnering efforts concurrent effects model</i>						
Age 5	0.07	0.05				
Age 6	0.03	0.03				
Age 7	0.02	0.02				
Age 8	0.04 †	0.02				
Age 9	0.02	0.02				
Age 10	0.02	0.02				
Age 11	0.04 ***	0.01				
Age 12	0.01	0.01				
Age 13	0.00	0.03				
<i>Reinvention efforts concurrent effects model</i>						
Age 5			0.00	0.03		
Age 6			0.00	0.02		
Age 7			0.00	0.02		
Age 8			0.02	0.02		
Age 9			0.02	0.01		
Age 10			0.02	0.01		
Age 11			0.03	0.01		
Age 12			0.01	0.02		
Age 13			-0.01	0.03		
<i>Maternal focus concurrent effects model</i>						
Child focus						
Age 5					0.26	0.19
Age 6					0.20 †	0.11
Age 7					0.19 *	0.09
Age 8					0.08	0.07
Age 9					-0.03	0.07
Age 10					0.05	0.09
Age 11					0.00	0.08
Age 12					0.03	0.07
Age 13					0.02	0.10
Repartnering focus						
Age 5					-0.32	0.27
Age 6					-0.25 †	0.15
Age 7					-0.23 †	0.13
Age 8					-0.05	0.09
Age 9					0.10	0.11
Age 10					-0.02	0.10
Age 11					0.08	0.09
Age 12					0.00	0.11
Age 13					-0.01	0.17
Loglikelihood (# free parameters)	-1808.5 (16)		-1792.81 (16)		-1788.39 (25)	
Intercept	0.92		1.34		1.19	
Slope	-0.13		-0.28		-0.23	
Quadratic Term	0.03		0.04		0.04	

Note: † p < .10; \* p < .05; \*\* p < .01; \*\*\* p < .001.

Table 3.3.7 Time-Variant Models Of Maternal Repartnering Characteristics On Levels Of Romantic Involvement During Childhood: Romantic Transitions.

	Model 1		Model 2	
	Parameter	SE	Parameter	SE
<i>Serious dating</i>				
Age 5	0.39 *	0.17		
Age 6	-0.18	0.16		
Age 7	-0.01	0.16		
Age 8	0.09	0.14		
Age 9	0.03	0.13		
Age 10	-0.04	0.15		
Age 11	-0.01	0.09		
Age 12	-0.14	0.12		
Age 13	-0.05	0.20		
<i>Sleep over</i>				
Age 5	-0.42	0.30		
Age 6	0.1	0.18		
Age 7	-0.04	0.17		
Age 8	-0.09	0.24		
Age 9	0.15	0.12		
Age 10	-0.01	0.23		
Age 11	0.04	0.16		
Age 12	-0.09	0.15		
Age 13	-0.27	0.18		
<i>Cohabitation</i>				
Age 5	0.93	0.70		
Age 6	0.31	0.22		
Age 7	0.05	0.18		
Age 8	-0.1	0.19		
Age 9	-0.15	0.13		
Age 10	0.03	0.20		
Age 11	-0.09	0.17		
Age 12	0.13	0.17		
Age 13	-0.18	0.31		
<i>Cummulative number of repartnering transitions</i>				
Age 5			0.16	0.11
Age 6			0.05	0.05
Age 7			0.01	0.04
Age 8			0.04	0.04
Age 9			0.01	0.03
Age 10			-0.03	0.04
Age 11			0.00	0.03
Age 12			-0.02	0.03
Age 13			-0.04	0.06
Loglikelihood (# free parameters)	-1789.70 (34)		-1796.84 (16)	
Intercept	1.25		1.11	
Slope	-0.19		-0.13	
Quadratic Term	0.04		0.03	

Note: † p < .10; \* p < .05; \*\* p < .01; \*\*\* p < .001.

## CHAPTER 4: GENERAL DISCUSSION

Families are incredibly complex. Describing the normative family experience is difficult, especially during the past several decades. Both children and adults are increasingly living in alternative family structures. It has become uncommon for children to live with two married parents throughout childhood as most children spend at least some time with single, step, cohabiting, or divorced parents.

Studies of this demographic shift toward alternative family structures have noted robust findings regarding children's exposure to family instability. Family instability has important consequences for children's well being across the life course. Children exposed to family instability generally report poorer well being (Amato & Keith, 1991; Wallerstein, 1991). Compared to children from continuously married two parent families, children with single, step, or divorced parents score lower in indicators of academic, social, and psychological well being (Amato, 2001; Cavanagh & Huston, 2006). There are similar consequences of family instability for well being during adolescence and young adulthood (Amato, Loomis, & Booth, 1994; Demo & Acock, 1996; Videon, 2002).

Exposure to family instability via marital transitions impacts children's own lives demonstrating that parents and children's lives are inextricably linked (Elder, 1994, 1998). Parents' romantic lives have a direct and measurable impact on many aspects of children's lives. This is particularly true when studying links between parents' marital transitions and children's trajectories of romantic and sexual involvement. The implications of family instability reverberate throughout children's romantic involvement

across the life course. During adulthood, these children report poorer marital relationships and higher rates of instability (Amato & Booth, 1991, 1996, 2001; Amato & DeBoer, 2001). They tend to enter marriages at younger ages and with less education than their counterparts (Bumpass et al., 1991; Mueller & Pope, 1977; Thornton, 1991)

As adolescents, family instability is associated with romantic and sexual initiation and involvement. Adolescents exposed to family instability are more likely to enter romantic relationships than their counterparts (Cavanagh et al., 2008; Cavanagh & Sullivan, 2009; Sullivan & Raley, 2008). Similarly, these adolescents reported earlier sexual debut (Davis & Friel, 2001; K. A. Johnson & Tyler, 2007; Lammers et al., 2000; Quinlan, 2003; Santelli, Lowry, Brener, & Robin, 2000; White & DeBlassie, 1992). Living outside of a two parent married family is associated with accelerated trajectories of adolescent romantic and sexual involvement.

These data provide evidence that family instability has important implications for children's trajectories of romantic involvement during adolescence and young adulthood. Yet it is unclear if exposure to family instability has consistent effects on romantic trajectories throughout the life course, particularly during earlier developmental periods. Little is known about how family instability may impact children's initial stages of romantic trajectories when romantic interest and involvement emerges during childhood.

Capturing the effects of family instability on the emergence of children's romantic interest and involvement necessitates an analysis that is sensitive to change over time. Trying to understand families through a static definition of their structure and

environment at a single point in time does not adequately reflect the complexity and change of family structure and instability. Understanding children's experiences in the family is better done by capturing the dynamic nature of families (Cavanagh, 2008; Sullivan & Raley, 2008). This study addressed this need by utilizing measures of family instability across two years while simultaneously measuring aspects of children's development. This technique recognizes that the family environment and structure are constantly changing while children rapidly develop. The primary objective of this paper was to model the concurrent impact of maternal repartnering on children's development of romantic interest and involvement as they mature. Fully exploring this objective required breaking it down into three research questions.

The first analysis provided a basic model of trajectories of romantic interest and involvement across childhood. Though I had little previous research on which to base my expectations, I expected children to report relationships that were in some ways similar to adolescent romances but developmentally relevant to this age period. Two distinct factors emerged from items assessed across the three waves of data. The first factor, labeled romantic interest, consisted of items dealing with children's thoughts and desires about romance with the opposite sex. Romantic interest included items such as spending a lot of time thinking or talking about a boy/girl they like. The response patterns for this factor more resembled a stable characteristic than a developmental process. Children tended to score high or low on romantic interest and showed very little developmental change as they aged.

On the other hand, romantic involvement was characterized by participation in 12 specific romantic activities such as, holding hands, kissing, and having a boy/girlfriend. Children's romantic involvement was best described by a quadratic growth pattern. As expected, rates of romantic involvement did increase dramatically as children matured. During later childhood, children tended to report involvement in approximately 6-8 events such as having a crush on a boy/girl, trying to sit next to a boy/girl that one likes, and talking to friends about boys/girls. Children also reported moderately high rates of romantic involvement during early childhood. These young children tended to indicate higher levels of having boy/girlfriends, holding hands, and sending love letters to each other, though a drop off occurred around age 7. There was some evidence in the literature of a low point during middle childhood these data supported. Levels of involvement were in fact lowest during middle childhood. The drop evident during middle childhood may be precipitated by a growing realization of what romantic involvement means to older family members and friends. A more mature understanding of what it means to "like" a boy or girl may be matched by a reluctance to admit to these feelings, which was evidenced in the item "had a crush on a boy/girl."

These two factors also showed significant covariance. Levels of romantic interest were associated with concurrent levels of romantic involvement as well as involvement during the following year. Though the causal direction of this relationship was not established in these analyses, it does suggest that children with higher levels of interest and curiosity in the opposite sex are also more likely to have acted on these ideas and

engage in more romantic activities. This may have important implications for those studying early initiation of romantic and sexual involvement during adolescence (e.g., Crockett et al., 1996). Besides targeting children and adolescents' behaviors, it may also be beneficial to focus on their romantic interest in efforts to delay romantic and sexual involvement. Future analyses aimed at understanding the link between the interplay of romantic interest and involvement would be helpful in developing a fuller understanding of the emergence of romance during childhood and adolescence.

The second research question explored variation in children's romantic interest and involvement. Pulling from adolescent romantic literature, I expected demographic characteristics such as gender and race/ethnicity to be related to romantic trajectories. These analyses provided no evidence that levels of romantic interest or change in romantic involvement as children aged were related to gender or race/ethnicity. The lack of significant findings may be due to small sample sizes of nonwhite children. A sample with greater diversity may be more sensitive to the racial and ethnic differences found among older populations.

As romantic involvement is generally considered a normative development task (Furman et al., 1999), I expected that the emergence of romantic interest and involvement may parallel other major developmental tasks of childhood. I predicted that higher levels of cognitive, social, and pubertal development would be associated with more advanced trajectories of romantic interest and involvement. Unfortunately, none of these developmental characteristics were related to children's romantic interest. Levels of

cognitive, social, and pubertal maturation did not distinguish between children with having high or low romantic interest. The lack of findings may have been due to the trait-like nature of romantic interest. As it did not evidence a developmental pattern, it may be unrelated to children's other developmental changes. Similarly, cognitive development was not associated with change in romantic involvement.

Both social skills and pubertal development were significantly related to change in romantic involvement however and were consistent with expectations. Especially among young children, greater social skills were linked to more accelerated trajectories of romantic involvement. Children who received higher ratings of social skills also reported higher levels of romantic involvement. High social skills during early childhood were responsible for young children's elevated levels of romantic involvement.

The implications of pubertal development were evident when boys and girls were considered separately. For girls, more advanced pubertal development was associated with greater levels of romantic involvement. There were no meaningful links between pubertal development and romantic involvement for boys however. This lack of an effect may be due to low levels of pubertal development relative to girls. Girls generally begin pubertal development before boys. Postponing these analyses until boys are older may give boys more time to reach puberty. Assessing boys as they reach adolescence and have greater pubertal development may reveal patterns similar to those found for girls.

The final research question evaluated the primary objective of evaluating the link between maternal repartnering characteristics and children's romantic trajectories. I

expected that exposure to mothers' repartnering behaviors and attitudes during the two years following filing for divorce would have implications for children's romantic interest and involvement. There was evidence that maternal repartnering attitudes, particularly regarding how mothers balance their child's needs with their own romantic needs, impacted children's romantic trajectories. Among children with low levels of romantic interest, there were significant increases in romantic interest when mothers were attuned to both their own romantic needs as well as their children's needs. Among most children with high levels of romantic interest, having mothers place more emphasis on their own romantic needs was associated with increasing romantic interest for these children. For most children, a mother's increased focus on her romantic life is associated with a increase in a child's interest in his or her romantic life as well. Generally, children's levels of romantic interest were responsive to the qualities and characteristics of their mothers' repartnering behavior. This is consistent with the idea that a child's greater awareness of the romantic domain has implications for the child's own romantic ideas. In this sense, especially for children with higher levels of romantic interest, mothers' focus on her romantic needs may be a risk factor for accelerated romantic trajectories. However young children with high levels of romantic interest responded to mothers' focus on her own romantic needs by decreasing romantic interest. These younger children may respond negatively to mothers' focus on her romantic life by scaling back from their own romantic interest and approaching the lower, normative levels of romantic interest.

There was no evidence that maternal repartnering behaviors were systematically

related to children's trajectories of romantic interest and involvement. Contrary to expectations, children's levels of romantic interest and development of romantic involvement did not correspond to their mothers' involvement in dating, sleepover, or cohabiting relationships. There were too few marriages to explore the impact and involvement in casual dating relationships had irregular patterns. Children responded more to mothers' attitudes than involvement in romantic relationships. The qualities of maternal repartnering mattered more than whether or not mothers repartnered. Though existing literature states the importance of parental romantic involvement and instability for their children's well being, evidence from this project suggests how mothers repartner is more consequential than if they repartner.

#### Limitations

Unfortunately, there was little evidence that maternal repartnering, beyond maternal attitudes, was associated with children's romantic trajectories. I found no support that mothers' romantic involvement following divorce are linked to the development of children's own romantic lives prior to adolescence. However, I do not believe these results invalidate the hypotheses or contradict previous literature. Though the qualities of repartnering did matter for children, the analyses used in this project may be underestimating the impact of maternal repartnering behaviors on children's romantic interest and involvement. For example, the hypotheses required that the analyses for romantic interest are broken down by age of the child. However, the results suggested that romantic interest does not follow a developmental trajectory. Thus, analyses

exploring the association between romantic interest and maternal repartnering behavior may be overcontrolled and may resemble the patterns found for maternal repartnering attitudes if age controls are reduced.

Additionally, I believe the nonsignificant findings may be also attributed to data limitations. This project suffered from two aspects of missing data. The first resulted in the ongoing nature of data collection at the time this project was completed. Though there were adequate sample sizes for each age, results could be improved by obtaining the full sample of households. When the data collection and management is finalized, this analyses of this project should be replicated to ensure the results hold. It is my expectation that some of the results may become significant once the sample sizes are increased and standard errors reduced.

The second component of problems due to missing data are common to all longitudinal research projects. This data set included many assessment points with extensive information collected at each interview. For example, much of the repartnering behavior information was pulled from a diary mothers completed on a monthly basis. By the end of the study, mothers could complete up to 25 diaries. AT the time of this project, only 24 mothers had completed all 25 diaries and one third had completed 75% of the diaries. These missing assessments could represent missed opportunities to capture repartnering transitions.

By the end of the study, some families were also lost due to attrition. At the time of this project completion, 219 of the 319 families had participated in each of the three

yearly assessments. Some of these families could have participated after the data was finalized for this project but many dropped out of the study. It should also be noted that it is impossible at the time these analyses were completed to parse out which families actually dropped out of the study and how many participated after the sample for this project was set. It is also important to realize that some of the families became ineligible, as mothers reconciled with their husbands or reported a change in the custody arrangement.

One other limitation with the sample that was not expected in the planning stages was the wide variation in parental separation. All families in this dataset were recruited and first interviewed within 120 after filing for divorce. In this sense, all the families had very recently moved toward achieving a legal divorce. However the families were very different once their length of physical separation was assessed. For some families, mothers and fathers were still living in the same house at the Baseline interview. For other families, parents had been separated for many years. This divergence in separation periods results in wide range of repartnering experiences that parents could have. Mothers who are still living with husbands or recently moved out likely have a reduced opportunity to repartner. Those who have been separated for years had a much longer time to reenter romantic relationships. Additionally, filing for divorce and repartnering may have different implications for the children depending on how long children perceive their parents to be broken up. Though some analyses explored this and no significant results were found, the variation in separation periods remains an interesting

characteristic of this sample. When these limitations are considered together, it is reasonable to conclude that maternal repartnering behaviors could still be consequential for the development of romantic interest and involvement if appropriate adjustments were made in future analyses based off information gained through this project.

#### Future Directions

This study provides evidence to support the case that mother's repartnering attitudes matter to children. One of the biggest struggles in recovering from divorce is adapting to the role of a single parent. Children proved to be attuned to mothers' attitudes, especially when considering how mothers balanced their lives as newly single. These findings suggest that children are sensitive to the balance that mothers strike.

Incorporating additional indicators of mothers attitudes and efforts to recover from divorce could prove useful in understanding other areas of child development as well.

There could also be meaningful gender differences beyond those explored here. Though all children were responsive to maternal repartnering attitudes, girls and boys may react differently to romantic involvement. As children tend to more closely associate themselves with their same sex parent (e.g., Peterson & Zill, 1986), it is possible that boys may react differently to new male romantic partners in the household. Especially for boys, the presence of a new man might be threatening to him and his relationship with his father. Further exploration of gender differences could prove to be useful.

This study was one of the first to explore how children first become romantically interested and involved with the opposite sex. However, the sample included only

children from households that recently filed for divorce. This project was narrowly defined to focus only on the effects of maternal repartnering. Though the findings may generalize to children exposed to family instability, the romantic trajectories presented here may not necessarily represent what would be found in the larger population of children, including those from two parent married families and from ethnic minorities. Currently, there is no dataset available that includes the indicators used in this study that is also representative of US children. This project represents a first step and could serve as a guide for others who would like to establish a baseline understanding of these processes for all children. Broadening the sample would also benefit from extending the window of assessment further into adolescence. This could provide more information about how romantic interest and involvement during childhood morphs into the romantic relationships typical of adolescence. A particular focus on opposite sex relationships within social networks across childhood and adolescence would also develop our understanding of these social transitions.

### Conclusions

This project has addressed a gap in the current literature by extending the definition of family instability and pushing back the reference frame onto earlier developmental periods. This project is one of the first to explore romantic interest and involvement among children, modeling trajectories of development as they mature. Results showed that individuals are actively thinking about and engaging in early forms of romantic interest and involvement during childhood and into preadolescence. This

offers support for the conception that early experiences provide a foundation for later development. The emergence of romantic interest and involvement was closely tied to some additional indicators of development, such as social and pubertal development. There was little support for the primary research objective hypothesizing that maternal repartnering would be associated with children's' romantic interest and involvement. However, future studies could address some of the limitations discussed here to carry out a more robust exploration of the impact of maternal repartnering behavior on children. There was evidence that a child's greater awareness of maternal repartnering has implications for the child's own romantic ideas, supporting the notion of parents and children as having linked lives.

## BIBLIOGRAPHY

- Amato, P. R. (1996). Explaining the intergenerational transmission of divorce. *Journal of Marriage and the Family*, 58(3), 628-640.
- Amato, P. R. (2000). The Consequences of Divorce for Adults and Children. *Journal of Marriage and the Family*, 62(4), 1269-1287.
- Amato, P. R. (2005). The impact of family formation change on the cognitive, social, and emotional well-being of the next generation. *The Future of Children*, 15, 75-96.
- Amato, P. R., & Booth, A. (1991). Consequences of Parental Divorce and Marital Unhappiness for Adult Well-Being. *Social Forces*, 69(3), 895-914.
- Amato, P. R., & Booth, A. (1996). A Prospective Study of Divorce and Parent-Child Relationships. *Journal of Marriage and the Family*, 58(2), 356-365.
- Amato, P. R., & Booth, A. (2001). The legacy of parents' marital discord: Consequences for children's marital quality. *Journal of Personality and Social Psychology*, 81(4), 627-638.
- Amato, P. R., & DeBoer, D. D. (2001). The Transmission of Marital Instability Across Generations: Relationship Skills or Commitment to Marriage? *Journal of Marriage and Family*, 63(4), 1038-1051.
- Amato, P. R., & Keith, B. (1991). Parental divorce and the well-being of children: A meta-analysis. *Psychological Bulletin*, 110(1), 26-46.
- Amato, P. R., Loomis, L. S., & Booth, A. (1994). Parental Divorce, Marital Conflict, and Offspring Well-Being during Early Adulthood. *Social Forces*, 73, 895.
- Amato, P. R. (2001). Children of divorce in the 1990s: An update of the Amato and Keith (1991) meta-analysis. *Journal of Family Psychology*, 15(3), 355-370. doi: 10.1037/0893-3200.15.3.355.
- Anderson, E. R., & Greene, S. M. (2005). Transitions in Parental Repartnering After Divorce. *Journal of Divorce & Remarriage*, 43(3-4), 47-62.
- Anderson, E. R., Greene, S. M., Walker, L., Malerba, C. A., Forgatch, M. S., & DeGarmo, D. S. (2004). Ready to Take a Chance Again: Transitions into Dating Among Divorced Parents. *Journal of Divorce & Remarriage*, 40(3-4), 61-75.

- Anderson, V. A., Anderson, P., Northam, E., Jacobs, R., & Catroppa, C. (2001). Development of Executive Functions Through Late Childhood and Adolescence in an Australian Sample. *Developmental Neuropsychology*, 20(1), 385-406.
- Archibald, A. B., Graber, J. A., & Brooks-Gunn, J. (2003). Pubertal processes and physiological growth in adolescence. In G. R. Adams & M. D. Berzonsky (Eds.), *Handbook of Adolescence* (pp. 24-47). Oxford: Blackwell.
- Bandura, A. (1977). *Social learning theory*. Prentice-Hall Englewood Cliffs,;
- Baxter, L. A., Braithwaite, D. O., Bryant, L., & Wagner, A. (2004). Stepchildren's Perceptions of the Contradictions in Communication with Stepparents. *Journal of Social and Personal Relationships*, 21(4), 447.
- Boscardin, C., Muthen, B., Francis, D., & Baker, E. (2008). Early identification of reading difficulties using heterogeneous developmental trajectories. *Journal of Educational Psychology*, 100, 192-208.
- Brown, B. B. (1999). "You're Going Out with Who?" Peer Group Influences on Adolescent Romantic Relationships. In W. Furman, B. B. Brown, & C. Feiring (Eds.), *The Development of Romantic Relationships in Adolescence* (pp. 291-329). Cambridge: Cambridge University Press.
- Brown, B. B. (2004). Adolescents' relationships with peers. In R. M. Lerner & L. Steinberg (Eds.), *Handbook of Adolescent Psychology* (pp. 363-394). Hoboken: John Wiley & Sons.
- Brown, S. L. (2004). Family Structure and Child Well-Being: The Significance of Parental Cohabitation. *Journal of Marriage and Family*, 66(2), 351-367.
- Browne, C. A., & Woolley, J. D. (2004). Preschoolers' Magical Explanations for Violations of Physical, Social, and Mental Laws. *Journal of Cognition and Development*, 5(2), 239-260.
- Buhrmester, D., & Furman, W. (1987). The Development of Companionship and Intimacy. *Child Development*, 58(4), 1101-1113.
- Bukowski, W. M., Newcomb, A. F., & Hartup, W. W. (1996). *The Company They Keep: Friendships in Childhood and Adolescence*. Cambridge: Cambridge University Press.

- Bumpass, L., & Lu, H. H. (2000). Trends in Cohabitation and Implications for Children's Family Contexts in the United States. *Population Studies*, 54(1), 29-41.
- Bumpass, L., & Raley, R. K. (1995). Redefining Single-Parent Families: Cohabitation and Changing Family Reality. *Demography*, 32(1), 97-109.
- Bumpass, L. L., Martin, T. C., & Sweet, J. A. (1991). The Impact of Family Background and Early Marital Factors on Marital Disruption. *Journal of Family Issues*, 1(12), 22-42.
- Bumpass, L. L., Raley, R. K., & Sweet, J. A. (1995). The changing character of stepfamilies: Implications of cohabitation and nonmarital childbearing. *Demography*, 32(3), 425-436.
- Campa, M. I., & Eckenrode, J. J. (2006). Pathways to Intergenerational Adolescent Childbearing in a High-Risk Sample. *Journal of Marriage and Family*, 68(3), 558-572.
- Carlson, W., & Rose, A. J. (2007). The Role of Reciprocity in Romantic Relationships in Middle Childhood and Early Adolescence. *Merrill-Palmer Quarterly*, 53(2), 262-290.
- Carver, K., Joyner, K., & Udry, J. R. (2003). National Estimates of Adolescent Romantic Relationships. In P. Florsheim (Ed.), *Adolescent Romantic Relations and Sexual Behavior: Theory, Research, and Practical Implications* (pp. 291–329). Mahwah, NJ: Erlbaum.
- Casey, B. J., Giedd, J. N., & Thomas, K. M. (2000). Structural and functional brain development and its relation to cognitive development. *Biological Psychology*, 54(1-3), 241-257.
- Casey, B. J., Tottenham, N., Liston, C., & Durston, S. (2005). Imaging the developing brain: what have we learned about cognitive development? *Trends in Cognitive Sciences*, 9(3), 104-110.
- Cavanagh, S. E. (2008). Family Structure History and Adolescent Adjustment. *Journal of Family Issues*, 29(7), 944.
- Cavanagh, S. E., Crissey, S. R., & Raley, R. K. (2008). Family Structure History and Adolescent Romance. *Journal of Marriage and Family*, 70(3), 698-714.

- Cavanagh, S. E., & Huston, A. C. (2006). Family Instability and Children's Early Problem Behavior. *Social Forces*, 85(1), 551-581.
- Cavanagh, S. E., & Sullivan, M. (2009). Family Instability, Childhood Relationship Skills, and Romance in Adolescence. Paper, Detroit, MI.
- Cherlin, A. J., Furstenberg, F. F., Chase-Lansdale, L., Kiernan, K. E., Robins, P. K., Morrison, D. R., et al. (1991). Longitudinal studies of effects of divorce on children in Great Britain and the United States. *Science*, 252(5011), 1386-1389.
- Choudhury, S., Blakemore, S. J., & Charman, T. (2006). Social cognitive development during adolescence. *Social Cognitive and Affective Neuroscience*, 1(3), 165-175.
- Collins, W. A. (2003). More than Myth: The Developmental Significance of Romantic Relationships During Adolescence. *Journal of Research on Adolescence*, 13(1), 1-24.
- Collins, W. A., & Steinberg, L. (2006). Adolescent development in interpersonal contexts. In N. Eisenberg, W. Damon, & R. Lerner (Eds.), *Handbook of Child Psychology* (Vol. 3, pp. 1003-1067). Hoboken: John Wiley & Sons.
- Compian, L., Gowen, L. K., & Hayward, C. (2004). Peripubertal Girls' Romantic and Platonic Involvement With Boys: Associations With Body Image and Depression Symptoms. *Journal of Research on Adolescence*, 14(1), 23-47.
- Comrey, A. L., & Lee, H. B. (1992). *A First Course in Factor Analysis*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Connolly, J., Craig, W., Goldberg, A., & Pepler, D. (1999). Conceptions of Cross-Sex Friendships and Romantic Relationships in Early Adolescence. *Journal of Youth and Adolescence*, 28(4), 481-494.
- Connolly, J., Craig, W., Goldberg, A., & Pepler, D. (2004). Mixed-Gender Groups, Dating, and Romantic Relationships in Early Adolescence. *Journal of Research on Adolescence*, 14(2), 185-207.
- Cooksey, E. C., Mott, F. L., & Neubauer, S. A. (2002). Friendships and Early Relationships: Links to Sexual Initiation among American Adolescents Born to Young Mothers. *Perspectives on Sexual and Reproductive Health*, 34(3), 118-126.

- Cottrell, L., Li, X., Harris, C., D'Alessandri, D., Atkins, M., Richardson, B., et al. (2003). Parent and Adolescent Perceptions of Parental Monitoring and Adolescent Risk Involvement. *Parenting, 3*(3), 179-195.
- Crockett, L. J., Raymond Bingham, C., Chopak, J. S., & Vicary, J. R. (1996). Timing of first sexual intercourse: The role of social control, social learning, and problem behavior. *Journal of Youth and Adolescence, 25*(1), 89-111.
- Davis, E. C., & Friel, L. V. (2001). Adolescent Sexuality: Disentangling the Effects of Family Structure and Family Context. *Journal of Marriage and Family, 63*(3), 669-681.
- Day, R. D. (1992). The Transition to First Intercourse among Racially and Culturally Diverse Youth. *Journal of Marriage and the Family, 54*(4), 749-762.
- Demo, D. H., & Acock, A. C. (1996). Family Structure, Family Process, and Adolescent Well-Being. *Journal of Research on Adolescence, 6*(4), 457-88.
- Diamond, L. M. (2003). Love Matters: Romantic Relationships Among Sexual-Minority Adolescents. In P. Florsheim (Ed.), *Adolescent Romantic Relations and Sexual Behavior: Theory, Research, and Practical Implications* (pp. 85-108). Mahwah, NJ: Erlbaum.
- Elder, G. H. (1994). Time, Human Agency, and Social Change: Perspectives on the Life Course. *Social Psychology Quarterly, 4*-15.
- Elder, G. H. (1998). The Life Course as Developmental Theory. *Child Development, 69*(1), 1-12.
- Ellis, B. J., Bates, J. E., Dodge, K. A., Fergusson, D. M., John Horwood, L., Pettit, G. S., et al. (2003). Does Father Absence Place Daughters at Special Risk for Early Sexual Activity and Teenage Pregnancy? *Child Development, 74*(3), 801-821.
- Fagot, B. I. (1977). Consequences of Moderate Cross-Gender Behavior in Preschool Children. *Child Development, 48*(3), 902-907.
- Feiring, C. (1999). Other-Sex Friendship Networks and the Development of Romantic Relationships in Adolescence. *Journal of Youth and Adolescence, 28*(4), 495-512.
- Feldman, S. S., Turner, R. A., & Araujo, K. (1999). Interpersonal context as an influence on sexual timetables of youths: Gender and ethnic effects. *Journal of Research on*

- Adolescence*, 9(1), 25-52.
- Flavell, J. H. (2000). Development of children's knowledge about the mental world. *International Journal of Behavioral Development*, 24(1), 15.
- Furman, W., Brown, B. B., & Feiring, C. (1999). *The Development of Romantic Relationships in Adolescence*. Cambridge: Cambridge University Press.
- Furman, W., & Buhrmester, D. (1992). Age and Sex Differences in Perceptions of Networks of Personal Relationships. *Child Development*, 63(1), 103-115.
- Giedd, J. N., Blumenthal, J., Jeffries, N. O., Castellanos, F. X., Liu, H., Zijdenbos, A., et al. (1999). Brain development during childhood and adolescence: a longitudinal MRI study. *Nature Neuroscience*, 2, 861-863.
- Giordano, P. C., Longmore, M. A., & Manning, W. D. (2006). Gender and the Meanings of Adolescent Romantic Relationships: A Focus on Boys. *American Sociological Review*, 71(2), 260-287.
- Giordano, P. C., Manning, W. D., & Longmore, M. A. (2005). The romantic relationships of African-American and White adolescents. *The Sociological Quarterly*, 46(3), 545-568.
- Gogtay, N., Giedd, J. N., Lusk, L., Hayashi, K. M., Greenstein, D., Vaituzis, A. C., et al. (2004). Dynamic Mapping of Human Cortical Development during Childhood through Early Adulthood. *Proceedings of the National Academy of Sciences of the United States of America*, 101(21), 8174-8179.
- Gresham, F., & Elliot, S. (1990). *The social skills rating system*. Circle Pines, MN: American Guidance Service.
- Hagenaars, J. A., & McCutcheon, A. L. (2002). *Applied Latent Class Analysis*. Cambridge University Press.
- Halpern, C. T. (2006). Integrating hormones and other biological factors into a developmental systems model of adolescent female sexuality. *Rethinking Positive Adolescent Female Sexual Development, New Directions for Child and Adolescent Development*. San Francisco, CA: Jossey-Bass, 9-22.
- Hammack, P. L. (2005). Advancing the Revolution in the Science of Sexual Identity Development. *Human Development*, 48(5), 303-308.

- Harter, S. (1982). The Perceived Competence Scale for Children. *Child Development*, 53(1), 87-97.
- Herba, C., & Phillips, M. (2004). Annotation: Development of facial expression recognition from childhood to adolescence: behavioural and neurological perspectives. *Journal of Child Psychology and Psychiatry*, 45(7), 1185-1198.
- Herd, G., & McClintock, M. (2000). The Magical Age of 10. *Archives of Sexual Behavior*, 29(6), 587-606.
- Hetherington, E. M., & Kelly, J. (2002). *For Better Or for Worse: Divorce Reconsidered*. New York: WW Norton & Company.
- Hines, A. M. (1997). Divorce-Related Transitions, Adolescent Development, and the Role of the Parent-Child Relationship: A Review of the Literature. *Journal of Marriage and the Family*, 59(2), 375-388.
- Hogan, D. P., & Kitagawa, E. M. (1985). The Impact of Social Status, Family Structure, and Neighborhood on the Fertility of Black Adolescents. *The American Journal of Sociology*, 90(4), 825-855.
- Inhelder, B., & Piaget, J. (1958). *The growth of logical thinking*. New York: Basic Books.
- Johnson, K. A., & Tyler, K. A. (2007). Adolescent Sexual Onset: An Intergenerational Analysis. *Journal of Youth and Adolescence*, 36(7), 939-949.
- Joyner, K., & Udry, J. R. (2000). You Don't Bring Me Anything but Down: Adolescent Romance and Depression. *Journal of Health and Social Behavior*, 41(4), 369-391.
- Jung, T., & Wickrama, K. (2008). An introduction to latent class growth analysis and growth mixture modeling. *Social and Personality Compass*, 2, 302-317.
- Kim, J., & Mueller, C. W. (1978). *Factor Analysis: Statistical Methods and Practical Issues*. Newbury Park, CA: Sage Publications Inc.
- Kovacs, D. M., Parker, J. G., & Hoffman, L. W. (1996). Behavioral, affective, and social correlates of involvement in cross-sex friendship in elementary school. *Child Development*, 67(5), 2269-2286.
- Kreuter, F., & Muthén, B. (2008). Analyzing Criminal Trajectory Profiles: Bridging Multilevel and Group-based Approaches Using Growth Mixture Modeling.

- Journal of Quantitative Criminology*, 24(1), 1-31. doi: 10.1007/s10940-007-9036-0.
- Lammers, C., Ireland, M., Resnick, M., & Blum, R. (2000). Influences on adolescents' decision to postpone onset of sexual intercourse: a survival analysis of virginity among youths aged 13 to 18 years. *Journal of Adolescent Health*, 26(1), 42-8.
- Lanza, S. T., Flaherty, B. P., & Collins, L. M. (2003). Latent class and latent transition analysis. *Handbook of psychology*, 2, 663-685.
- Larson, R., & Richards, M. H. (1991). Daily Companionship in Late Childhood and Early Adolescence: Changing Developmental Contexts. *Child Development*, 62(2), 284-300.
- Lauritsen, J. L. (1994). Explaining Race and Gender Differences in Adolescent Sexual Behavior. *Social Forces*, 72(3), 859-883.
- Leaper, C. (1994). Exploring the Consequences of Gender Segregation on Social Relationships. *New Directions for Child Development*, 65, 67-86.
- Leaper, C., & Anderson, K. J. (1997). Gender Development and Heterosexual Romantic Relationships During Adolescence. *New Directions for Child Development*, 78, 85-103.
- Levesque, R. J. R. (1993). The romantic experience of adolescents in satisfying love relationships. *Journal of Youth and Adolescence*, 22(3), 219-251.
- Levy, G. D., Taylor, M. G., & Gelman, S. A. (1995). Traditional and Evaluative Aspects of Flexibility in Gender Roles, Social Conventions, Moral Rules, and Physical Laws. *Child Development*, 66(2), 515-531.
- Lewis, C., & Carpendale, J. (2002). Social Cognition. In P. K. Smith & C. H. Hart (Eds.), *Blackwell Handbook of Childhood Social Development*. Blackwell.
- Lo, Y., Mendell, N., & Rubin, D. (2001). Testing the number of components in a normal mixture. *Biometrika*, 88, 767-778.
- Longmore, M. A., Manning, W. D., & Giordano, P. C. (2001). Preadolescent Parenting Strategies and Teens' Dating and Sexual Initiation: A Longitudinal Analysis. *Journal of Marriage and Family*, 63(2), 322-335.

- Maccoby, E. E. (1988). Gender as a Social Category. *Developmental Psychology*, 24, 755-765.
- McClintock, M. K., & Herdt, G. (1996). Rethinking Puberty: The Development of Sexual Attraction. *Current Directions in Psychological Science*, 5(6), 178-183.
- McLanahan, S., & Sandefur, G. D. (1994). *Growing Up with a Single Parent: What Hurts, What Helps*. Cambridge, MA: Harvard University Press.
- Menning, C., Holtzman, M., & Kapinus, C. (2007). Stepfather involvement and adolescents' disposition toward having sex. *Perspectives of Sexual and Reproductive Health*, 39(2), 82-89.
- Mueller, C. W., & Pope, H. (1977). Marital Instability: A Study of Its Transmission between Generations. *Journal of Marriage and the Family*, 39(1), 83-93.
- Muthen, B. O. (2004). Latent variable analysis: Growth mixture modeling and related techniques for longitudinal data. In D. W. Kaplan (Ed.), *Handbook of Quantitative Methodology for the Social Sciences* (pp. 345-368). Newbury Park, CA: Sage Publications Inc. Retrieved December 3, 2008, from [http://www.statmodel.com/papers\\_date.shtml](http://www.statmodel.com/papers_date.shtml).
- Muthen, B. (2000). Latent variable mixture modeling. In Kaplan (Ed.), *Advanced Structural Equation Modeling: New Developments and Techniques* (pp. 1-33). Mahwah, NJ: Lawrence Erlbaum Associates.
- Muthen, B., & Asparouhov, T. (2008). Growth mixture modeling: Analysis with non-Gaussian random effects. In G. Fitzmaurice, M. Davidian, G. Verbeke, & G. Molenberghs (Eds.), *Longitudinal Data Analysis* (pp. 143-165). Boca Raton: Chapman & Hall, CRC Press.
- Muthen, B., & Muthen, L. (2005). Integrating person-centered and variable-centered analyses: Growth mixture modeling with latent trajectory classes. *Alcoholism: Clinical and Experimental Research*, 24, 882-891.
- Muthen, L. K., & Muthen, B. O. (2007). *Mplus User's Guide*. 5th Edition. Los Angeles, CA: Muthen & Muthen. Retrieved December 3, 2008, from <http://www.statmodel.com/download/usersguide/Mplus%20Users%20Guide%20v5.pdf>.

- Muthen, L., & Muthen, B. (n.d.). Mplus Discussion. Retrieved December 3, 2008, from <http://www.statmodel.com/cgi-bin/discus/discus.cgi>.
- Nagin, D. S. (1999). Analyzing Developmental Trajectories: A Semiparametric, Group-Based Approach. *PSYCHOLOGICAL METHODS*, 4, 139-157.
- Paus, T. (2005). Mapping brain maturation and cognitive development during adolescence. *Trends in Cognitive Sciences*, 9(2), 60-68.
- Pearson, J., Muller, C., & Frisco, M. L. (2006). Parental involvement, family structure, and adolescent sexual decision making. *Sociological Perspectives*, 49(1), 67-90.
- Pellegrini, A. D. (2004). Sexual segregation in childhood: a review of evidence for two hypotheses. *Animal Behaviour*, 68(3), 435-443.
- Peterson, J. L., & Zill, N. (1986). Marital disruption, parent-child relationships, and behavior problems in children. *Journal of Marriage and Family*, 48, 295-307.
- Piaget, J. (1954). *The construction of reality in the child*. New York: Ballentine.
- Quinlan, R. J. (2003). Father absence, parental care, and female reproductive development. *Evolution and Human Behavior*, 24(6), 376-390.
- RaiI, A. A., Stanton, B., Wu, Y., Li, X., Galbraith, J., Cottrell, L., et al. (2003). Relative influences of perceived parental monitoring and perceived peer involvement on adolescent risk behaviors: an analysis of six cross-sectional data sets. *Journal of Adolescent Health*, 33(2), 108-118.
- Raley, R. K. (2001). Increasing fertility in cohabiting unions: Evidence for the second demographic transition in the United States. *Demography*, 38(1), 59-66.
- Raley, R. K., & Pearson, J. (2006). *Chasing a greased pig: How can we get a handle on adolescent dating and romantic relationships?* Los Angeles, CA.
- Raley, R. K., & Sullivan, M. K. Social-contextual influences on adolescent romantic and sexual activity.
- Repacholi, B., & Slaughter, V. (2003). *Individual Differences in Theory of Mind: Implications for Typical and Atypical Development*. New York: Psychology Press.
- Richards, M. H., Crowe, P. A., Larson, R., & Swarr, A. (1998). *Developmental Patterns*

- and Gender Differences in the Experience of Peer Companionship during Adolescence. *Child Development*, 69(1), 154-163.
- Rose, A. J. (2007). Structure, Content, and Socioemotional Correlates of Girls' and Boys' Friendships: Recent Advances and Future Directions. *Merrill Palmer Quarterly*, 53(3), 489-506.
- Santelli, J. S., Lindberg, L. D., Abma, J., McNeely, C. S., & Resnick, M. (2000). Adolescent Sexual Behavior: Estimates and Trends from Four Nationally Representative Surveys. *Family Planning Perspectives*, 32(4), 156-194.
- Santelli, J. S., Lowry, R., Brener, N. D., & Robin, L. (2000). The association of sexual behaviors with socioeconomic status, family structure, and race/ethnicity among US adolescents. *American Journal of Public Health*, 90, 1582-1588.
- Schwartz, G. (1978). Estimating the dimension of a model. *Annals of Statistics*, 6, 461-464.
- Shulman, S., & Kipnis, O. (2001). Adolescent romantic relationships: a look from the future. *Journal of Adolescence*, 24(3), 337-351.
- Shulman, S., & Scharf, M. (2000). Adolescent Romantic Behaviors and Perceptions: Age- and Gender-Related Differences, and Links With Family and Peer Relationships. *Journal of Research on Adolescence*, 10(1), 99-118.
- Smith, A. B., & Inder, P. M. (1990). The Relationship of Classroom Organisation to Cross-age and Cross-sex Friendships. *Educational Psychology*, 10(2), 127-140.
- Smith, R. B., Davidson, J., & Ball, P. (2001). Age-related variations and sex differences in gender cleavage during middle childhood. *Personal Relationships*, 8(2), 153-165.
- South, S. J., Haynie, D. L., & Bose, S. (2005). Residential mobility and the onset of adolescent sexual activity. *Journal of Marriage and Family*, 67(2), 499-514.
- Sowell, E. R., Trauner, D. A., Gamst, A., & Jernigan, T. L. (2002). Development of cortical and subcortical brain structures in childhood and adolescence: a structural MRI study. *Developmental Medicine and Child Neurology*, 44(01), 4-16.
- Steiger, J., & Lind, J. (1980, May). Statistically-based tests for the number of common factors. Iowa City, IA.

- Steinberg, L. (2005). Cognitive and affective development in adolescence. *Trends in Cognitive Sciences*, 9(2), 69-74.
- Strough, J. N., & Covatto, A. M. (2002). Context and Age Differences in Same- and Other-gender Peer Preferences. *Social Development*, 11(3), 346-361.
- Sullivan, H. S. (1953). *The interpersonal theory of psychiatry*. New York: Norton.
- Sullivan, M. K., & Raley, R. K. (2008, August). The impact of family instability and environment on the initiation of dating and sexual debut. Paper, Boston, MA.
- Sullivan, M. (2006). *The Role of Adolescent Identity in Romantic and Sexual Relationships during Emerging Adulthood*. Master's Thesis, University of Texas at Austin.
- Susman, E. J., Dorn, L. D., & Schiefelbein, V. L. (2003). Puberty, Sexuality, and Health. In I. B. Weiner, D. K. Freedheim, & J. A. Schinka (Eds.), *Handbook of Psychology* (Vol. 3, pp. 295-324). Hoboken: John Wiley & Sons.
- Sweeney, M. M. (2007). Stepfather Families and the Emotional Well-Being of Adolescents. *Journal of Health and Social Behavior*, 48(1), 33-49.
- Teachman, J. (2003). Premarital Sex, Premarital Cohabitation, and the Risk of Subsequent Marital Dissolution Among Women. *Journal of Marriage and Family*, 65(2), 444-455. doi: doi:10.1111/j.1741-3737.2003.00444.x.
- Thomson, E., McLanahan, S. S., & Curtin, R. B. (1992). Family Structure, Gender, and Parental Socialization. *Journal of Marriage and the Family*, 54(2), 368-378.
- Thorne, B. (1993). *Gender Play: Girls and Boys in School*. New Jersey: Rutgers University Press.
- Thornton, A. (1991). Influence of the Marital History of Parents on the Marital and Cohabital Experiences of Children. *The American Journal of Sociology*, 96(4), 868-894.
- Thornton, A., & Camburn, D. (1987). The Influence of the Family on Premarital Sexual Attitudes and Behavior. *Demography*, 24(3), 323-340.
- Toga, A. W., Thompson, P. M., & Sowell, E. R. (2006). Mapping brain maturation.

- Trends in Neurosciences*, 29(3), 148-159.
- Vandenberg, R. J., & Lance, C. E. (2000). A Review and Synthesis of the Measurement Invariance Literature: Suggestions, Practices, and Recommendations for Organizational Research. *Organizational Research Methods*, 3(1), 4.
- Videon, T. M. (2002). The Effects of Parent-Adolescent Relationships and Parental Separation on Adolescent Well-Being. *Journal of Marriage and Family*, 64(2), 489-503. doi: 10.1111/j.1741-3737.2002.00489.x.
- Wallerstein, J. (1991). The Long-Term Effects of Divorce on Children: A Review. *Journal of the American Academy of Child & Adolescent Psychiatry*, 30(3), 349.
- Whitbeck, L. B., Simons, R. L., & Kao, M. (1994). The Effects of Divorced Mothers' Dating Behaviors and Sexual Attitudes on the Sexual Attitudes and Behaviors of Their Adolescent Children. *Journal of Marriage and the Family*, 56(3), 615-621.
- White, S. D., & DeBlassie, R. R. (1992). Adolescent Sexual Behavior. *Adolescence*, 27, 183-191.
- Wigfield, A., Brynes, J. P., & Eccles, J. S. (2006). Development during early and middle adolescence. In P. A. Alexander & P. H. Winne (Eds.), *Handbook of Educational Psychology* (pp. 87- 113). Mahwah, NJ: Erlbaum.
- Wolfinger, N. H. (2005). *Understanding the Divorce Cycle: The Children of Divorce in Their Own Marriages*. Cambridge: Cambridge University Press.
- Woodcock, R., & Johnson, M. (1989). *Woodcock-Johnson Tests of Achievement*. Allen, TX: DLM.
- Zill, N., Morrison, D., & Coiro, M. J. (1993). Long-term effects of parental divorce on parent-child relationships, adjustment, and achievement in young adulthood: Families in transition. *Journal of family psychology*, 7(1), 91-103.
- Zimmer-Gembeck, M. J. (2002). The development of romantic relationships and adaptations in the system of peer relationships. *Journal of Adolescent Health*, 31, 216-225.

## VITAE

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