2010-07-01

Emotional Intimacy, Coparenting, and Family Work: A Latent Class Growth Analysis

Adam Michael Galovan
Brigham Young University - Provo

Emotional Intimacy, Coparenting, and Family Work:

A Latent Class Growth Analysis

Adam M. Galovan

A thesis submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of

Master of Science

Erin K. Holmes, Chair
Alan J. Hawkins
Jason S. Carroll
Jeremy B. Yorgason

School of Family Life

Brigham Young University

August 2010

ABSTRACT

Emotional Intimacy, Coparenting, and Family Work:

A Latent Class Growth Analysis

Adam M. Galovan

School of Family Life

Master of Science

From a family systems theoretical view, this paper uses both variable-oriented and person-oriented research approaches to examine parental marriage as a dynamic, interdependent system, and extends the literature by examining parental marriage across a 15 year time span. Employing latent growth curve analysis of 490 mother-father dyads from the NICHD Study of Early Child Care and Youth Development, this study considers multiple aspects of the relationship husbands and wives have together as spouses (emotional intimacy), parents (ideas about discipline and a child-centered vs. adult-centered orientation to childrearing), coparents (agreement regarding parenting beliefs and discipline), and household managers (agreement on the division of household and childcare tasks), exploring these associations from one month post-partum to when the child is 15 years old. Second, using latent class growth analysis, this study explores how these factors come together in different relationship classes to form distinct typologies of change for these stably partnered parents. In general mothers and fathers show similar trends in emotional intimacy over time—with decline during the early years after child birth followed by a modest increase through first grade and then relative stabilization until age 15. They also report similar levels of authoritative discipline strategies and adult-centered parenting beliefs. On average mothers are responsible for approximately twice the amount of family work than are fathers. The latent class growth analysis revealed four distinct classes. The most significant differences between classes were in level of emotional intimacy and family work responsibility. Balancing of the instrumental and relational aspects of family life is posited as an explanation of between class differences.

Keywords: marriage, parenting, coparenting, typologies

ACKNOWLEDGEMENTS

I am very grateful to the many people who contributed to the successful completion of my thesis. There are many that have made my graduate experience at BYU memorable. First and foremost, I want to thanks my wife, Mandi, and our three children—Brooke, Cameron, and Andrew—for offering support in so many ways and putting up with me as I worked on this project. I am grateful for my mentor and committee chair, Dr. Erin K. Holmes, who has provided me with this research opportunity and has taught me much about doing quality research. I am grateful to Erin, Alan Hawkins, Jason Carroll, and Jeremy Yorgason who have offered excellent insights and critiques that have helped guide the development of this thesis. I am also grateful to Dr. Joseph Olsen for his invaluable guidance in conducting the analyses.

Above all, I am grateful for the grace of God and the inspiration and strength that has come from my Heavenly Father to make my best be good enough for this task.

Table of Contents

List of Tables

List of Figures

Introduction

Longitudinal studies of the parental marriage have begun to deviate from the "one-size-fits-all" model of marital decline for new parents, with more recent examinations suggesting that the addition of a new child may deteriorate, enrich, or have little impact on the early years of a parent's marital union (Belsky & Hsieh, 1998; Shapiro, Gottman, & Carrère, 2000; Lawrence, Rothman, Cobb, Rothman, & Bradbury, 2008). Despite these advancements, more can be done to better understand the complexity of the interrelations between the parental and spousal subsystems in a marriage. For example, measures of the parental marriage have generally focused on global marital outcomes—such as satisfaction or conflict (Bradbury, Fincham, & Beach, 2000), seldom acknowledging more nuanced aspects of spousal unions such as perceptions of emotional closeness, or the extent of congruence or difference in attitudes regarding marital roles and responsibilities.

Another deficiency is that the vast majority of studies of the parental marriage have failed to use designs that capture the dyadic nature of the relationship and assume that the most important changes to the parental marriage occur in the early years of parenting. Indeed it is rare to locate a study that has explored the parental marital trajectory beyond the first 3 years of an infant's life (Huston & Holmes, 2004). But to understand the ways that men and women navigate their many marital demands, research must see the parental marriage as a dynamic entity. This includes viewing parents not only as spouses, but also as partners in parenting and household management. Different couple typologies of change may emerge if multiple domains of the couple relationship are taken into account simultaneously. Research that more accurately considers the full range of the couple relationship concurrently (e.g. nuances of a marital union, along with parenting, coparenting, and household responsibilities) and extends beyond the first 3

years to examine other meaningful transitional periods for married parents (e.g. the child's transition to preschool. elementary school, middle school, etc.) will add to our understanding of the parental marriage as a dynamic, interdependent, and complex system.

"One-Size" (Analysis) Does Not "Fit-All"

The central premise of this article is that capturing the complex and dynamic nature of change in one's research requires attention to both a traditionally used "variable-oriented" approach, along with a less commonly used "person-oriented" approach to exploring developmental change. Much of the research on coparenting, family work, and the interaction between marriage and parenting has been conducted from what Bergman and Trost (2006) call a "variable- oriented" approach. Such an approach focuses on discerning the influence of a few particular variables on a few outcome variables of interest, often using linear methods such as structural equation modeling or multiple regression analyses. Bergman and Trost note the value of a "variable-oriented" approach to research. Indeed much has been learned about marriage, coparenting, and related constructs through this approach. The "variable-oriented" approach's focus on central tendency, however, does not allow for the comparison of within group patterns or typologies.

Accordingly, Bergman and Trost (2006) also note the importance of a "person-oriented" research approach. The person-oriented approach "takes a holistic and dynamic view of the individual as an integrated totality over time, whereas the [variable-oriented] approach views the individual as a summation of variables over time" (p. 604). Person-oriented research allows for the exploration of possible typologies within a population. Common person-oriented methodologies include cluster analysis, latent class analysis, latent profile analysis, latent class growth analysis, growth mixture modeling, and any other approach wherein individuals are

grouped together to determine how factors interact to create various typologies. Person-oriented research can improve understanding of developmental processes by revealing differential patterns of interaction between variables among different groups (Bergman & Trost, 2006). Bergman and Trost note that both the variable-oriented and person-oriented approaches add to our understanding. Together they can provide greater understanding than either approach alone.

Aims of the Present Study

Taking a systemic theoretical view (Bowen, 1978; Minuchin, 1974), this article uses both variable-oriented and person-oriented approaches to improve our understanding of the parental marriage as a dynamic, interdependent system, extending well beyond the first 3 years after the birth of a baby. First, employing latent growth curve analysis (LGC) of 490 mother-father dyads from the NICHD Study of Early Child Care and Youth Development, I consider multiple aspects of the relationship husbands and wives have together as spouses (emotional intimacy), parents (ideas about discipline and a child-centered vs. adult-centered orientation to childrearing), coparents (agreement regarding parenting beliefs and discipline), and household managers (agreement on the division of household and childcare tasks). I explore these associations from one month post-partum to when their child is 15 years old. Second, using latent class growth analysis (LCGA), I explore how these factors come together in different relationship classes to form distinct typologies of change for these stably partnered parents.

Review of Literature

Couple Typologies

Researchers examining typologies of change in the couple relationship during the stages of parenting have largely found similar results. For example, based on measures of husband report of love and wife report of conflict over a 5 year period, using separate cluster analyses

Belsky and Hsieh (1998) found three groups of couples in their sample of 99 couples. They labeled the three groups: *stays good*, *good-gets-worse*, and *stays bad*/*bad to worse*, indicating that couples in their sample tended to maintain quality marriages, decline in their marital quality, or remain at a poor level of marital quality.

In many studies the authors determine couple typology by examining marital variables. In doing so, they have come to a similar conclusion, namely couples seem to group together into 3 or 4 broad categories. Typologies of change in the couple relationship tend to be unidimensional (i.e., they only describe one particular construct). A better, more holistic understanding of the couple relationship may emerge if, in constructing typologies, multiple domains of the couple relationship are taken into account simultaneously. Furthermore, in most marital typology research typologies are constructed based solely on the marital relationship. Their findings may be similar, in part, because each of the constructs used in determining the typologies is a related aspect of the overall marital relationship. It may be, however, that we are only seeing part of the picture. Family systems theory (Bowen, 1978; Minuchin, 1974) emphasizes the importance of the *executive subsystem*—the marital *and* parental subsystem. This view of the couple is more holistic and conveys the understanding that individuals are complex. To date, researchers have not considered this complexity in their examination of couple typologies.

Theoretical Background

Many theoretical perspectives convey the understanding that parenting does not happen in a vacuum. Whether implicitly or explicitly taking a family systems view (Bowen, 1978; Minuchin, 1974), most researchers generally look at parenting from within a family context. However, researchers have not adopted this paradigm to study potential couple typologies. From

family systems theory (Bowen, 1978; Minuchin, 1974), we see the family as an interconnected unit in which each individual—and each relationship among individuals—influences all the others. Relationships within the family affect each parent's relationship and degree of involvement with the children. Systemically, how each spouse parents their child(ren), how the other parent views the parenting, and how spouses parent together (coparenting) should influence the parents' marital relationship. Likewise, the marriage will also influence the parenting and coparenting domains of family life.

Coparenting and Marriage

From a family system's perspective (Bowen, 1978; Minuchin, 1974), the marital subsystem and parental subsystem are distinct but related (see also McHale, Kuersten-Hogan, & Rao, 2004). Following the birth of a child, husbands and wives are no longer just spouses. Each takes on the individual role of parent, along with adopting new responsibilities as a "coparent." Broadly defined, coparenting is "the ways that parents work together in their roles as parents" (Feinberg, 2002, p. 173). Coparenting is a complex, couple-level (dyadic) construct with multiple dimensions (Feinberg, 2003; Van Egeren & Hawkins, 2004).

Feinberg (2003) discussed four components of coparenting: *childrearing agreement*, *division of labor*, *support/undermining*, and *joint family management*. Van Egeren and Hawkins (2004) added a fifth component, *coparenting solidarity*. Childrearing agreement is conceptualized as the amount of agreement parents have in their parenting beliefs and practices. The division of labor component incorporates how household duties are divided. It also incorporates satisfaction with that division. The support/undermining component deals with the degree each parent affirms the other's parenting. Joint family management incorporates three elements: interparental conflict, appropriate boundaries, and a balanced contribution to family

interaction. Finally, coparenting solidarity is conceptualized as a feeling of "growing together as parents" (Van Egeren & Hawkins 2004, p. 168), and is typified by a sense of unity as a couple and as parents. Thus, coparenting incorporates the degree of support and solidarity a couple shares, the limiting of undermining the other's parenting, the way roles within the household are shared, and the way spouses work together to manage their daily life as parents (McHale et al., 2004).

Given the multiple roles parents share, it is natural to question how the marital and coparental subsystems interact. McHale and colleagues (2004) note that healthy marriages often lead to healthier relationships as coparents. Schoppe-Sullivan, Mangelsdorf, Frosch, and McHale (2004) suggest that coparenting has differential effects on marriage over time. For example, during the initial transition to parenthood, coparenting and marriage appear to be somewhat independent (Schoppe-Sullivan et al.). As time passes, however, and spouses come to interact more as parents, coparenting and marriage become more connected. Further, early coparenting behavior has been found to be a stronger predictor of both marriage behavior and coparenting behavior when children are preschoolers than early marital behavior (Schoppe-Sullivan et al., 2004). These finding suggest that over time the coparental relationship takes on more significant meaning in the husband-wife relationship, therefore typologies of the parental marriage ought to connect coparenting outcomes with marital outcomes (see also O'Brien & Peyton, 2002; Van Egeren, 2004; Van Egeren & Hawkins, 2004).

Little research has used a person-oriented analytical approach (Bergman & Trost, 2006) to examine coparenting and marital typologies. One recent exception is the work of Ryan, Martin, and Brooks-Gunn (2006), who recently explored parenting styles of both mothers and fathers. Using six parenting scales—sensitivity, cognitive stimulation, positive regard, negative

regard, intrusiveness, and detachment—they ran separate cluster analyses for mothers and fathers. Similar clusters emerged for both parents. Couples were then connected in one of four cluster pairs—supportive mother and father, supportive mother/unsupportive father, supportive father/unsupportive mother, and unsupportive mother and father. Parents who were both supportive made up 62% of the sample. Unsupportive parents comprised 8% of the sample. The remaining 30% of parents were split evenly between the two dissimilar parenting groups. Thus, while 70% of the sample reported similar parenting practices, another 30% of parents reported dissimilar parenting strategies. These findings are similar to those of Deal, Halverson, and Wampler (1999), who found that the majority of parents who were similar in parenting were generally "good" parents. Deal and colleagues also examined associations with the marital relationship. They did not, however, estimate latent classes of potential longitudinal trajectories of couplehood. Further, Ryan and colleagues did not examine how similarity in parenting was related to the marital relationship or look at changes in similarity longitudinally.

Research Questions

Little research has examined the concurrent development of the coparenting and marital relationships longitudinally (McHale et al., 2004), particularly beyond the preschool years. Furthermore, few, if any, research has considered how indicators from multiple domains of the coparental and marital relationships interact to create typologies of couple relationships. This paper adds to the body of coparenting and marital research by addressing the following research questions:

1. What does the multidimensional couple relationship look like, as it evolves?
2. Based on several measures of the couple relationship, how do couples group together to form various typologies of "couplehood"?

To answer these principle research questions, I will need to address the following questions: (1) How similar are couples' parenting attitudes, discipline strategies, and beliefs about household role division? (2) After considering demographic and child factors (ethnicity, number of years married, family's average income to needs ratio, whether or not the target child is first born), how do a couple's emotional intimacy, parenting beliefs, discipline strategies, and report of household role division develop over time? (3) Similarly, after considering the same demographic and child factors noted above, how does a couple's similarity in parenting beliefs, discipline strategies, and report of household role division (coparenting indexes) change over time? (4) How do mothers' and fathers' parenting beliefs, discipline strategies, and report of household role division influence emotional intimacy for both mothers and fathers? (5) How does similarity in parenting beliefs, discipline strategies, and report of household role division (coparenting indexes) influence emotional intimacy for both mothers and fathers?

Methods

Sample

This study used a sample from the Study of Early Child Care, a comprehensive longitudinal study funded by *The Eunice Kennedy Shriver* National Institute of Child Health and Human Development. Researchers recruited participants from 31 hospitals in or near 10 geographic sites across the United States. Recruitment resulted in a sample of 1,364 healthy infants and their families. The sampling plan and selection are described in more detail in NICHD Early Child Care Research Network (1997). Data from mothers and children were collected when the children were 1, 6, 15, 24, 36, 54 months old, at first, third, fourth, fifth, and sixth grades, and when the child was 15 years old (see Table 1 for time points of data collection for each measure). Data from fathers were not collected from all 10 geographic sites until the

second phase of data collection (when the target child was 54 months of age). For example, data regarding father's responsibility for family work and childcare and his parenting beliefs were not collected until the target child's first grade school year. Further, the large majority of father responses came only from resident fathers. A total of 534 (52%) of the initial 1,024 married/partnered couples separated or divorced during the course of the study. For this reason, this study uses data from 490 couples who were continuously partnered during the 15 year study. Despite some of these limitations, the large scale of the study and access to individual and dyadic data regarding children, mothers, and fathers in the same family builds on earlier studies that lacked a geographically diverse sample and independent measurement.

In cases where complete data was not available at all time points full maximum likelihood estimation was used to account for missing values. To allow for sufficient sample size in the analysis—and given the fact that site missingness during the first phase of data collection was largely similar to planned missing-data survey designs (Graham, Taylor, & Cumsille, 2001)—full maximum likelihood estimation was also used to estimate missing values for the phase 1 father data. Indeed, in studies where planned missing-data designs are employed, or which have similar missing data patterns, full maximum likelihood estimation of missing values is preferred to listwise deletion or similar methods (Graham, Taylor, & Cumsille), as statistical power is preserved and results tend to be less biased.

The children in the sample were evenly divided between males and females and the majority were primarily White, non-Hispanic (89%) with a smaller number of Hispanic (4.5), African American (3.3%), and other ethnicities (3.3%). As would be expected for a subset of continuously coupled, mostly married individuals, this subset of families is slightly better educated, has a higher income-to-needs ratio, and has a lower percentage of children from

minority ethnic groups when compared with the entire Study of Early Child Care sample (see Table 2 for demographic statistics).

Measures

Parental education and child ethnicity. Mothers reported parental education levels and child race/ethnicity during the one-month interview. Due to insufficient sample size ethnicity was collapsed into two groups: White, non-Hispanic and Other. Ethnicity was dummy coded with White, non-Hispanic as the reference group.

Household income-to-needs ratio. Study participants reported total household income (including government transfer payments). A ratio was then calculated by dividing the total family income (including transfer payments) by the federal poverty threshold level based on family size. This ratio provides a helpful view of a family's overall economic status. The average income-to-needs ratio was used as a control variable in the present study.

Adult-centered parenting beliefs. Parents completed the 16-item traditional beliefs subscale of the Parental Modernity Scale of Child-rearing and Educational Beliefs (Shaefer & Edgerton, 1985) to assess their traditional (adult-centered) parenting beliefs when their child was 1 month old and in first and fourth grades. As the intent was to measure traditional parenting beliefs, only the 9 items that measured parenting beliefs were used in this study (the 7 items that measured educational beliefs were not used). The items were scored on a five-point Likert scale ranging from 1 = "Strongly disagree" to 5 = "Strongly agree." Sample items include questions such as "The most important thing to teach children is absolute obedience to whoever is in authority," and "children must be carefully trained early in life or their natural impulses will make them unmanageable." Higher total scores indicate more adult-centered beliefs about raising children. The omega measure of reliability is generally superior to Cronbach's alpha—as it does

not assume that individual items contribute equally to the construct (i.e., tau-equivalence)—and is interpreted in the familiar 0 to 1 range (McDonald, 1999). It is derived by squaring the correlation between the scale score and the true score. The scale demonstrated adequate reliability, with the omega coefficient (ω) ranging from .83 (at 1 month) to .84 (at 1st grade) for fathers and being stable for mothers with scores of .86 at both 1 month and 1st grade.

Authoritative discipline strategies. Parents' authoritative discipline strategies were assessed with the 6-item subscale of the Raising Children questionnaire (Shumow, Vandell & Posner, 1998), an extensive revision of Greenberger's Raising Children Checklist (Greenberger & Goldberg, 1989). Sample questions include questions such as "Do you give your child a chance to explain before punishing him/her?" and "Do you praise your child when he/she does something you like?" The items were scored on a four-point Likert scale ranging from 1 = "Definitely No" to 4 = "Definitely Yes." Parents answered the questions when their child was 54 months old, in first grade, and in third grade. The scale demonstrated adequate reliability, with ω ranging from .63 (in 3rd grade) to .70 (in 1st grade) for fathers and from .59 (in 1st grade) to .61 (at 54 months) for mothers—though the lower reliability may indicate multiple dimensions within this construct.

Parental responsibility for family work. When the child was in first and fifth grades, fathers and mothers rated their involvement in16 childrearing activities (such as giving the child a bath, packing a lunch for the child, and getting up at night to attend to the child; Glysch & Vandell, 1992) and 9 housework activities (such as cleaning the bathroom, vacuuming, and preparing family meals) on a 5-point proportional scale ranging from 1= "My partner's job" to 5 = "My job". One item (taking out the garbage) was removed as it did not load well with the other items. Higher values denote more responsibility for childrearing and household work

activities. The scale demonstrated adequate reliability, with ω ranging from .88 (in 1st grade) to .90 (in 5th grade) for fathers and from .90 (in 5th grade) to .91 (in 1st grade) for mothers. In computing the similarity index (see the section on coparenting indexes below), mothers' scores were reverse-coded to be comparable to fathers'.

Emotional intimacy. Fathers and mothers completed the 6-item emotional intimacy subscale of the Personal Assessment of Intimacy in Relationships (PAIR) (Schaefer & Olson, 1981) when the child was 1, 6, 15, 24, 36, and 54 months old; when the child was in first, third, fifth, and sixth grade; and when the child was 15 years old. Sample items include "My spouse/partner listens to me when I need someone to talk to," and "I feel neglected at times by my spouse/partner." Responses range from 1 = "Strongly disagree" to 5 = "Strongly agree". Higher scores indicate a more positive assessment of emotional intimacy and support in the marriage. The scale demonstrated adequate reliability, with ω ranging from .77 (at 1 month) to .89 (at 6th grade) for fathers and from .81 (at 1 month) to .90 (at 6th grade) for mothers.

Coparenting indexes. As noted, coparenting is a dyadic construct (McHale et al., 2004; Van Egeren & Hawkins, 2004). Accordingly, in this study similarity scores across three measures of parenting—parenting beliefs, discipline strategies, and report of family work responsibility—are used to represent different domains of coparenting. Kenny, Kashy, and Cook (2006) argue that an effective way to measure similarity between two people is to compute the intraclass correlation after making adjustments for the bias of "stereotype accuracy" (p. 330). Using individual scale items, computing the intraclass correlation yields an overall similarity score for a scale. In dyadic analysis, the intraclass correlation coefficient ranges from -1 (completely dissimilar) to 1 (completely similar) with zero indicating chance similarity. Stereotype accuracy is the tendency of any two people in a population to be similar simply

because they reside in the same population (i.e., they are similar because of a prevailing population stereotype). For example, there may be a general belief that males should be more responsible for yard care and females should be more responsible for family meals and childcare. Thus, any two individuals may exhibit a degree of similarity due to this general stereotype. By subtracting the group mean for each item before computing the intraclass correlation, the similarity index indicates how similar two individuals in a close relationship are above and beyond their similarity due to stereotype accuracy.

Results

Analysis Plan

Figure 1 provides a conceptual understanding of the latent class growth analysis. In preparation for the latent class growth analysis, several steps were taken. First, indexes of dyadic similarity were computed for the parenting measures to represent coparenting domains. Next, latent growth curves were estimated for fathers' and mothers' report of emotional intimacy. Following the construction of the emotional intimacy growth curves, three growth curves were estimated for each of the parenting variables, one for each parent and one for the index of dyadic similarity. These growth curves were then correlated with emotional intimacy and each other. Correlations between each of the parenting growth curves and the similarity index growth curves were small to moderate, suggesting that the computed dyadic indexes were distinct from the parenting variables (see Table 3 for correlations). I then examined the variance components for the slopes and intercepts of each of the growth curves to determine if there was significant variability (unexplained heterogeneity) to warrant estimation of latent classes. Latent classes can be estimated if there is unexplained heterogeneity in the data above and beyond what can be explained by control variables. When heterogeneity is not continuous and cases (couples) group

together, latent classes can add to our understanding of within group differences by separating cases (couples) into smaller groups with similar characteristics—improving our understanding of unobserved heterogeneity within a sample or population (Muthén, 2001, 2004). Individuals from different classes will have significant and meaningful differences in their scores.

Significant variability in the slopes and intercepts of emotional intimacy and each of the correlates above and beyond what could be explained by the influence of the control variables allowed for person-oriented analysis, namely the estimation of latent classes. I began by estimating 1 latent class; then I estimated successively more classes. Comparing the loglikelihood and Bayesian Information Criterion (BIC) fit statistics for each model to the previous one indicated when the optimal number of classes had been estimated. Additionally, the Lo-Mendell-Rubin test (LMR) was used to determine if estimating an additional class explained a significantly greater amount of variability than estimating one fewer class (Jung & Wickrama, 2008; Nylund, Asparouhov, & Muthén, 2007). When adding an additional class did not explain a significantly greater amount of variability—according to the loglikelihood, BIC, and LMR values—I did not continue to estimate models with more classes.

Latent Growth Curve Analyses

Parallel latent growth curve analyses with maximum likelihood estimation were conducted using Mplus (Muthén & Muthén, 2007). By simultaneously estimating husband's and wife's growth trends in the same model, the dyadic nature of marital relationships was taken into account. Following Kurdek's (2003) methodological suggestions of longitudinal married couple analyses, I accounted for correlated disturbances between spouses at each assessment time point for all measures. Variances for the disturbance terms for all of the measures, except the family work growth curves, were freely estimated. As the growth models for fathers' family work

responsibility, mothers' family work responsibility, and similarity in report of family work responsibility are derived from only two time points, a model estimating the variances of the disturbances would not be identified. Rather than assuming the scale was perfectly reliable, by setting the disturbance variance to zero, variance for the disturbance terms were set according to the method described by Byrne (2010). At each time point and for each spouse, the disturbance variance was set equal to the quantity of 1 minus the scale reliability multiplied by the scale variance. The disturbance variances for family work similarity at each time point were fixed to zero. In order to estimate correlations between each of the family work responsibility intercept and slope variables, correlations between disturbances of spouses at each assessment time point were not estimated. Additionally, for emotional intimacy, correlations between adjacent disturbances were estimated. To enable model identification, correlations between adjacent disturbances were not estimated for the remaining measures. Before model estimation, scale scores were converted to match the metric used for the emotional intimacy scale (i.e., having a possible score range from 6 to 30). The metric for the similarity indexes was retained, such that possible scores ranged from -1 to 1.

Emotional intimacy growth model. Using growth curve modeling, I estimated latent *Intercept* and *Slope* variables for the emotional intimacy of each spouse. The *Intercept* factor estimates initial level of the repeated measures, and the *Slope* factor estimates the degree of change over time. As is commonly done to estimate the intercept, the factor loadings for each indicator was fixed to one for the *Level* factor. Time 1 assessment was defined as baseline (1 month postpartum). To model linear growth, *Slope* factor loadings at time 1 and time 11 were fixed to 0 and 15 respectively, and the intervening factor loadings were fixed at a value corresponding to the age (in years) at which the measures were administered. The linear model

fit the data well (χ^2 (208) = 409.581, $p < .001$; CFI = .962; TLI = .958; RMSEA = .044, lo = .038, high = .051).

Given the complex and dynamic nature of marriage, change over time may not be linear. Consequently, I estimated a quadratic change model for emotional intimacy. Factor loadings for the additional quadratic slope variables were fixed at values squared from the linear model. The quadratic slopes for both mothers and fathers were not significant, however. Despite this, assuming change in emotional intimacy over the 15 year period to be linear may be inaccurate. Accordingly, I estimated a piecewise (stage) growth curve. In estimating piecewise growth curves, the curve is broken into segments and linear slopes are estimated for each segment. Factor loadings for all time points prior to the stage are set at zero, and factor loadings after the stage are set equal to the factor loading of the last time point for the stage. An examination of the mean scores for each spouse's emotional intimacy indicated three general stages (see Table 1 for mean scores). These stages also made conceptual sense. The first slope represents emotional intimacy during the transition to parenthood with the segment representing time from one month old to age two. The second slope represents emotional intimacy during the transition to preschool and school with the segment representing time from age two to first grade. The third and final slope represents emotional intimacy during the school years, with the segment representing time from first grade to age 15. The piecewise model fit the data well (χ^2 (178) = 228.426, $p < .01$; CFI = .991; TLI = .988; RMSEA = .024, lo = .013, high = .033) and had significantly better fit than the linear model ($\mathbf{\Delta}\chi^2$ (30) = 181.155, $p < .001$). Given the better fit of the piecewise growth model, it was employed for the remainder of the analyses. With the exception of the first stage slope for mothers, all variances corresponding to the *Intercept* and *Slope* factors in the piecewise growth model were significant. Thus, it was appropriate to

estimate latent classes and to enter theoretically meaningful correlates, and/or control variables into the model to see how they may account for the unexplained variability.

Parenting and coparenting growth models. I also estimated latent *Intercept* and *Slope* variables for each parenting measure for each spouse and for similarity in each of the parenting measures. To model linear growth, *Slope* factor loadings at each of the time points were fixed at a value corresponding to the age (in years) at which the measures were administered. As both adult-centered parenting and discipline strategies were measured at 3 time points and change may not be linear, I also estimated quadratic slopes for each variable. In estimating the quadratic slopes with 3 time points, a model estimating the variances of the disturbances would not be identified. Accordingly, variance for the disturbance terms were set using the method described above (see also Byrne, 2010). The quadratic slope for adult-centered parenting was not significant. The quadratic slope for authoritative discipline strategies, however, was significant. The quadratic model for discipline strategies also fit the data much better (χ^2 (27) = 38.452, *ns*; CFI = .982; TLI = .969; RMSEA = .029) than the linear model (χ^2 (26) = 136.480, $p < .01$; CFI = .823; TLI = .694; RMSEA = .093). The means and variances for the slopes of fathers' adult-centered parenting beliefs and similarity in adult-centered parenting beliefs were small and not significant, suggesting that scores are stable over time and that there is not significant between persons variability. As variances near zero can cause problems in estimation and lead to inadmissible solutions (Bollen, 1989), and the mean variances were not significantly different from zero, the variances of these slope components were fixed at zero (see Table 4 for estimated means and variances).

Modeling of control variables. Several control variables were included in the model. Control variables entered into the model were average income-to-needs ratio, mother's years of

education, father's years of education, the number of years the couple had been together, mother's age, a dummy code indicating if the child was female, a dummy code indicating if the child was the mother's first child, and a race dummy code indicating if the child was of an ethnic minority. In the final model, each of the latent slope and intercept variables were regressed on the control variables.

Final model. After the growth curves for each of the parenting and coparenting variables were estimated they were then entered into a complete model with the piecewise emotional intimacy growth curve for both parents. Including the quadratic slope for the discipline strategies curve caused an error in estimation, likely because the quadratic was based on only three time points. Observing the trend for the means at the three time points (see Table 1), it was evident that change was not linear. Similar to the emotional intimacy growth model, I estimated a 2 stage piecewise growth model for authoritative discipline strategies, retaining the constraints on the disturbance term variances for model identification. This model was entered into the complete model and there were no errors in estimation. The final model with the piecewise growth curve for authoritative discipline strategies had significantly better model fit than the model with a linear growth curve ($\mathbf{\Delta}\chi^2$ (154) = 306.576, p < .001). The final model consisting of the piecewise emotional intimacy growth curves and the parenting and parenting similarity (coparenting) growth curves fit the data well (χ^2 (774) = 973.204, $p < .01$; CFI = .978; TLI = .962; RMSEA = .023). The average level and trajectory for emotional intimacy and each of the parenting variables is shown in Figure 2, while average level and trajectory of similarity in parenting (coparenting) is shown in Figure 3.

Consistent with previous studies evaluating satisfaction, on average the emotional intimacy in the partnership seems to experience a downturn during the transition to parenthood

for both mothers and fathers, as evidenced by the decline in emotional intimacy in the first 2 years of the child's life. However, after this time emotional intimacy increased through first grade. Thereafter, it declined at a slower rate until age 15. It is important to note, however, that there was significant variability in both level and trajectory (see Table 4 for estimated means and standard deviations of the slope and intercept variables).

Mothers reported slightly higher authoritative discipline scores than did fathers. Authoritative discipline increased for both parents from 54 months to 1st grade and decreased for from 1st to 3rd grade, with both the increases and decreases for mothers being greater than fathers. Considering both stages, authoritative discipline decreased from 54 months to 3rd grade. At the same time, parents' similarity in discipline decreased slightly and then increased slightly, all in all remaining relatively stable over time. Their similarity, however, was still only slightly above what might be expected by chance (i.e., a mean score of zero). Adult-centered parenting beliefs also decreased slightly for both parents. Again mothers showed a steeper decrease than did fathers. In contrast to authoritative discipline strategies, fathers had slightly stronger adult-centered parenting beliefs than did mothers. Parents' similarity in adult-centered parenting beliefs showed a small decrease overtime, and, like discipline, parents were only slightly more similar than would be expected by chance. Similar to emotional intimacy, in general there was significant variability in scores between persons (see Table 4).

Different than adult-centered parenting and discipline strategies, parents were much more similar in their report of family work responsibilities, with family work similarity being more than halfway between chance similarity and complete similarity. Overtime, parents' similarity in report of family work responsibility decreased slightly (see Figure 3). However, similarity remained at a rather high level. It is interesting to note the high level of similarity in report of

family work responsibility given the disparity in report of how much family work each spouse is doing (see Figure 2). Given a minimum possible score of 6, wives reported shouldering approximately twice as much family work as did husbands.

Control variables' influence. Many of the control variables entered into the overall model were significant. Mothers with higher average income–to–needs ratio had higher initial levels of intimacy (β = .16), and older mothers reported a lower initial level of intimacy (β = –.16). When the child was female mothers also reported a lower initial level of intimacy (β = –.14). In cases where the child was the first born, mothers' and fathers' 1st stage intimacy slope was significantly steeper (β = –.39, –.46 respectively). Minority fathers had a steeper stage 2 intimacy increase (β = .25) as well as a steeper stage 3 intimacy decrease (β = –.22). Fathers with a higher income-to-needs ratio had less steep stage 3 emotional intimacy decrease (β = .27).

Fathers reported higher initial levels of family work responsibility when mothers had a higher level of education (β = .17). The influence of fathers being from an ethnic minority on their initial level of family work responsibility approached significance (β = .10, p < .06), with fathers of an ethnic minority performing more family work. When the child was the first born, mothers had lower initial levels of family work responsibility (β = –.15) and steeper increases in family work responsibility (β = .16).

More educated mothers and fathers had significantly weaker adult-centered parenting beliefs (β = –.25 and –.38, respectively). Mothers had significantly weaker adult-centered parenting beliefs if they were older (β = –.10) or had a more educated spouse (β = –.25). Interestingly, if mothers had a more educated spouse, they had a larger increase in adult-centered parenting beliefs (β = .29). Mothers of children of an ethnic minority race had significantly stronger adult-centered parenting beliefs (β = .10).

More educated mothers had higher initial levels of authoritative parenting (β = .23). When the child was a first born, parents were initially less similar in discipline strategies (β = –.15) and had higher increases in similarity from 54 months to 1st grade (β = .14). Those married longer had a less steep increase in similarity in authoritative parenting from 1st to 3rd grade (β = –.11). When mothers were more educated, fathers had a less steep increase in authoritative parenting from 1st to 3rd grade (β = –.29).

Relationships among emotional intimacy variables. Fathers' and mothers' levels and trajectories were significantly correlated in several significant ways (see Table 3). Mother and father intimacy intercepts were significantly correlated (r = .51). Mothers' first and second stage intimacy slopes were significantly negatively correlated (r = –.67), as were fathers' (r = –.60). Mother and father second stage intimacy slopes were significantly correlated (r = .42). Mother and father 3rd stage intimacy slopes were highly correlated (r = .95), suggesting marital intimacy follows a similar trajectory for both parents from first grade to age 15. Interestingly, Mother and father first stage intimacy slopes were uncorrelated.

Other significant correlations. In addition to the correlations between growth curve components of the emotional intimacy growth curves, there were several other significant correlations (see Table 3). Similarity in family work was highly negatively associated with change in family work similarity (r = –.95), suggesting that those with higher levels of similarity also have the largest decreases in similarity over time. Mother and father report of initial family work responsibility were significantly correlated (r = –.51) as were their levels of change in family work over time (r = –.52). Mother and father adult-centered parenting beliefs were significantly correlated (r = .44). Stronger adult-centered parenting beliefs for fathers were associated with increased stage 2 intimacy for mothers (r = .20) and decreased similarity in

initial report of family work responsibility (r = –.11). A strengthening of mothers' adult-centered parenting beliefs was correlated with decreased stage 2 intimacy for fathers (r = –.42). Fathers' initial level of authoritative parenting was strongly associated with his stage one change in authoritative parenting (r = –.77). Fathers' initial level of authoritative parenting was positively correlated with mothers' initial level of intimacy (r = .32) as well as his own initial level of intimacy (r = .42). However, fathers' second stage change in authoritative parenting was positively associated with his stage 2 change in intimacy (r = .56). Mothers' initial level of authoritative parenting was significantly associated her initial level of adult-centered parenting beliefs (r = –.21) and stage 1 change in authoritative parenting (r = –.85). Initial level of similarity in parenting was associated with both stage 1 (r = –.98) and stage 2 (r = .37) changes in parenting similarity. Change in stage 2 parenting similarity was also significantly related to stage 1 change in parenting similarity (r = –.47) and initial level of mothers adult-centered parenting beliefs (r = .13).

Latent Class Growth Analysis

Having performed the (variable-oriented) latent growth curve analysis, I then proceeded to the (person-centered) latent class growth analysis. Latent class growth analysis is similar to growth mixture modeling in that one estimates latent classes based on latent slopes and intercepts. In LCGA, however, all intercept and slope variances and covariances within each class are set to zero. Using LCGA is beneficial with very complex models as LCGA is less computationally demanding and provides reasonable estimates of latent class membership (Jung & Wickrama, 2008). To avoid non-invertible covariance matrices when setting the slope and intercept variances to zero—in cases where the variance of the disturbance terms for each of the similarity indexes were also set to zero—the disturbance term variances for the observed

similarity index variables were set to a small positive value (.05). Because of the difficulty in obtaining high numerical precision with very complex models (1) the observed-data log likelihood derivative convergence criterion, (2) the absolute observed data loglikelihood change convergence criterion, and (3) the relative observed data loglikelihood change convergence criterion for the EM algorithm were set to .01, .001, and .000001 respectively (see Muthén & Muthén, 2007, p. 504). Furthermore, control variables were not include in the initial class estimation model but were considered after class estimation (see below).

I began by estimating a model with one latent class and estimated models with a successively greater number of classes. To determine the optimal number of latent classes Nylund et al. (2007) recommends the use of several indicators. A preliminary indicator is to use the model where the loglikelihood value begins to level off or get worse. An additional indicator of the model with the optimal number of latent classes is the model with the lowest Bayesian Information Criterion (BIC). Finally, the Lo-Mendell-Rubin test (LMR) provides an indication as to if the model estimated provides a better fit to the data than the model with one less class. Nylund et al. (2007), however, note that the first model in which the LMR is non-significant may indicate the model with the optimal number of latent classes. Based on the trend in loglikelihood values (1 class = -51934.192; 2 classes = -47644.824; 3 classes = -46594.675; 4 classes = -45983.502; 5 classes = -51934.192), the BIC values (1 class = 104450.659; 2 classes = 96057.754; 3 classes = 93497.349; 4 classes = 93106.775; 5 classes = 105193.988), and the LMR *p*-values (1 class, not applicable; 2 classes, $p < .01$; 3 classes, $p < .05$; 4 classes, $p > .05$; 5 classes, $p > .05$), a four class solution seemed most appropriate (see Table 5).

Between class differences in control variables. Following the estimation of the four latent classes, I conducted a multivariate analysis of variance (MANOVA) to determine

differences between classes for each of the control variables. In addition to the control variables mentioned in the overall latent growth curve analysis (above), I also included a dummy coded variable indicating site missingness during the initial phase of data collection. The MANOVA was significant (Wilk's $\Lambda = .878$, $F(27, 1349.92) = 2.27$, $p < .01$), indicating there were differences between classes, with the effect for class on the control variables being small (partial $\eta^2 = .04$). As follow-up tests to the MANOVA, I conducted a univariate analysis of covariance (ANCOVA). The Bonferroni method was employed to control for Type I error. There were significant differences between classes in mothers' education ($F(3, 470) = 3.04$, $p < .05$, partial $\eta^2 = .02$), fathers' education ($F(3, 470) = 3.28$, $p < .05$, partial $\eta^2 = .02$), income-to-needs ratio ($F(3, 470) = 5.66$, $p < .01$, partial $\eta^2 = .04$), and race ($F(3, 470) = 3.54$, $p < .05$, partial $\eta^2 = .02$).

Follow-up tests were conducted to evaluate pairwise differences among the means. There were a few significant differences in the mean scores of each of the four classes. Though the ANOVA for mothers' education was significant, none of the pairwise comparisons were significant. Fathers' education for class 2 ($M = 15.96$ years) was significantly higher than class 3 ($M = 15.04$ years, $p < .05$). Similarly, couples in class 2 had significantly higher income-to-needs ratios ($M = 5.68$) than those in class 3 ($M = 4.46$, $p < .01$) or class 4 ($M = 4.34$, $p < .01$). Class 3 had significantly more couples of an ethnic minority (18%) than class 1 (6.1%, $p < .05$) or class 2 (8%, $p < .05$).

Difference in control variable influence by class. To determine any different effects between classes for each of the control variables on the 11 intercept and 18 slope variables in this study, I entered them as covariates in a multivariate analysis of covariance (MANCOVA) with the slopes and intercepts as dependent variables and class as the grouping variable. The MANCOVA was significant (Wilk's $\Lambda = .00$, $F(87, 1296.47) = 1091.88$, $p < .001$), indicating

there were differences between classes, with the effect for class on the dependent variables being very large (partial $\eta^2 = .99$). The covariate, site missingness, also was significant (Wilk's $\Lambda = .907$, $F(29, 433) = 1.52$, $p < .05$), as was mothers' education (Wilk's $\Lambda = .902$, $F(29, 433) = 1.63$, $p < .05$) with the effects being small (partial $\eta^2 = .09, .10$ respectively). None of the between subjects effects for site missingness were significant, indicating that site missingness did not have a significant effect on any individual slope or intercept. Only two of the 29 between subject effects were significant for mothers' education: fathers' second stage emotional intimacy slope ($F(1, 488) = 3.90$, $p < .05$) and authoritative discipline first stage slope ($F(1, 488) = 3.90$, $p < .05$).

Differences between classes. Noting the effect of the control variables, I used the slope and intercept estimates from the overall latent growth curve analysis—which included the control variables—to make comparisons between classes. To determine any different effects between classes for each of the 11 intercept and 18 slope variables in this study, I conducted a multivariate analysis of variance (MANOVA) with the slopes, intercepts, and control variables as dependent variables and class as the grouping variable. The MANOVA was significant (Wilk's $\Lambda = .08$, $F(114, 1297.92) = 15.53$, $p < .01$), indicating there were differences between classes, with the effect for class on the dependent variables being large (partial $\eta^2 = .58$).

As follow-up tests to the MANOVA, I again conducted a univariate analysis of covariance (ANOVA). The Bonferroni method was employed to control for Type I error. The majority of slope and intercept variables were significantly different between classes. Table 6 shows the means and standard deviations for each class and the *F*-values for the ANOVAs.

Figures 3 and 4 show the latent growth curves for each of the four classes after considering the influence of the control variables. Figure 3 shows the mother and father report

of emotional intimacy, their own family work responsibility, adult-centered parenting beliefs, and authoritative discipline strategies, and Figure 4 shows similarity in report of family work responsibility, authoritative discipline strategies, and adult-centered parenting beliefs.

Compared to those in Classes 2 and 3, those in Class 1 had lower levels of emotional intimacy but slightly higher levels than those in class 4. Of all four classes, mothers in Class 1 report having the greatest responsibility for family work, while fathers in Class 1 report the least responsibility for family work. Fathers in Classes 1 and 2 show little change in their family work responsibility over time, while those in Classes 3 and 4 show small increases. Conversely, mothers in Classes 1 and 2 showed small increases in family work responsibility, while those in Classes 3 and 4 showed slight declines. Those in Class 1 report higher levels of adult-centered parenting beliefs than those in Classes 2 or 3 but lower levels than those in Class 4. Similarly, those in Class 1 report lower levels of authoritative discipline than those in Classes 2 or 3 but higher levels than those in Class 4. Of all the classes, those in Class 2 had the highest levels of emotional intimacy, followed closely by those in class 3. Those in Class 2 had slightly lower adult-centered parenting beliefs and slightly higher authoritative discipline strategies than those in Class 3. Compared to those in Class 3, however, those in Class 2 had more traditional family work arrangements—with those in Class 3 having the most equal division of family work (see Figures 5 and 6 for between class differences for each of the constructs).

Discussion

From a systemic perspective (Bowen, 1978; Minuchin, 1974), this study has considered the various ways in which couples with children come together in committed relationships. Given the variability in latent slopes and intercepts, it is apparent that no single “snapshot” of one or two aspects of the couple relationship can adequately describe their experience.

This study supports the notion that the couple relationship is indeed complex, interdependent, and dynamic. A simplistic view that marriage is primarily a function of couple satisfaction—or even emotional intimacy—seems incomplete. How do couples come together in a multiplicity of dimensions? How do they manage their household? What do they believe about parenting? How do they discipline their children? Additionally, how does each of these facets of the couple relationship change over time?

My analysis has sought to understand these questions. In both the variable and person oriented analyses, it is apparent that couples' emotional intimacy does change over time and that this change does not appear to be uniform across the first several years following the birth of a child. There are periods of decline and increase in emotional intimacy. Whether or not the child is the firstborn, following the birth of a child, on average, parents seem to experience a drop in overall emotional intimacy. However, this change does not seem to be the same for both parents, as evidenced by the fact that the slopes of emotional intimacy during the transition to parenthood phase of the overall growth model were not significantly correlated. After the transition to parenthood, however, change seems to be more similar for parents. During the transition to preschool and school, both mother and father report of intimacy were significantly correlated. This correlation strengthened during the grade school and middle school years, with mothers and fathers reporting almost identical rates of change.

In terms of family work responsibility, mothers and fathers are remarkably similar in their report of who generally is responsible for childcare and household labor tasks. Consistent with previous research (Bartley, Blanton, & Gilliard, 2005; Lennon & Rosenfeld, 1994), I found that mothers tend to shoulder a much greater portion of family work than do fathers. After considering the minimum score possible, in my variable oriented analysis on average mothers

performed nearly twice the amount of family work as did fathers. This is remarkably similar to Lennon and Rosenfeld's (1994) finding that most women are willing to do nearly two thirds of the work within a household before they perceive the division of labor to be unfair and that most men will feel they are performing an unfair share of the work if they are doing more than 36 percent.

In contrast to family work responsibility, couples show much less similarity in both adult-centered parenting beliefs and authoritative discipline strategies. This may be due to the fact that responsibility for family work is more behavioral, while each of the other parenting constructs are more abstract and cognitive. For example, a couple is more likely to agree on who generally gives the child a bath than on if they praise their child when he/she does something they like. For both adult-centered parenting beliefs and authoritative discipline mothers had more positive scores than fathers. Mothers may more naturally exhibit nurturing behaviors with their children than fathers for a variety of reasons, including biological tendencies, social modeling, and expectations (Hawkins, Christiansen, Pond-Sargent, & Hill, 1993; Hawkins, Lovejoy, Holmes, Blanchard, & Fawcett, 2008).

As interesting and illuminating as the variable-oriented overall latent growth curve analysis can be, the person-oriented latent class growth analysis provides unique insights. Examining the similarities and differences between the latent classes in Figures 3 and 4 naturally leads to the question of what distinguishes one class from another. While comparisons can be made across classes by looking at individual variables, systemically it makes sense to pose an overall question: Is there an underlying construct or constructs that may contribute to between class differences in the majority of the variables?

In an initial comparison of classes, it is easy to note that those in Classes 2 and 3 have much higher levels of emotional intimacy and both spouses' report of intimacy are much more similar than those in Classes 1 and 4. Another stark difference across classes is the report of family work responsibility. Class 1 has very disparate reports between spouses and Class 3 had the most similar report, while Classes 2 and 4 fell somewhere in between. In a recent study, Bartley et al. (2005) considered division of family work in terms of *high-control* and *low-control*, instrumental tasks. Low-control tasks are the traditional ". . . 'female' jobs such as cooking, cleaning, [and] doing the wash," while high-control tasks are the traditional ". . . 'male' jobs such as making repairs around the house, taking out the garbage, maintaining the cars, [and] doing yard work" (p. 77). Low-control, instrumental tasks must be performed regularly and impact the daily life of those in the family, while high-control tasks do not typically impact daily family life. After evaluating the questions for the family work construct in this study, it was apparent that the measure of family work was a measure of who was responsible for the *instrumental* tasks of daily life, whereas the measures of adult-centered parenting, authoritative discipline strategies, and emotional intimacy seemed indicative of *relational* aspects of each spouse's life. Given these two global domains of family life, (1) the instrumental management of day-to-day household upkeep and childcare and (2) the management of familial relationships, I then turned back to the LCGA results to evaluate how the interpretation of between class differences might be aided by considering these broad domains.

Those in Classes 2 and 3 had the highest level of emotional intimacy as well as the most positive scores for authoritative discipline and adult-centered parenting. The most notable difference was in the instrumental area of family work responsibility. Those in Class 2 were similar, on average to the overall model, with mothers shouldering approximately twice as much

family work as fathers, while mothers in Class 3 performed less than 1.5 times as much work as fathers. Interestingly, with the greater sharing of family work, those in Class 3 did not have higher emotional intimacy than those in Class 2. Though those in Class 3 were more "progressive" in sharing family work than those in Class 2, they had more "traditional" scores for both measures of parenting.

Given these differences, one might ask: How do couples balance the instrumental and relational demands of couplehood? Does attention to the instrumental tasks in family life take away from relational, that is to say are they on opposite ends of a single continuum or are there separate continuums? Do couples compartmentalize these areas of life, or do they see the instrumental in terms of its relational influence?

It seems that couples in each of the classes may be striving to balance instrumental and relational aspects of family life differently. In Class 2 the mother may take on more family work to allow her spouse to pay more attention to their child(ren). Thus, for these mothers, taking on more work may be a way to show more commitment and love to spouse and children (Ahlander & Bahr, 1995; Galovan, Schramm, Lee, & Holmes, 2010). Conversely, those in Class 3 might see responsibility for family work and childcare as a symbol of their commitment to one another and their children. Viewing family work as an important part of their family relationships, spouses may "negotiate" a more equitable division of work. Those in Class 1 seem to adopt a traditional approach to tackling the instrumental tasks, with the wife doing a much greater amount of family work than the husband. This view also manifests itself in more traditional attitudes toward parent-child relationships and discipline. It may be that this slightly less nurturing environment influences the marital relationship and they report lower levels of intimacy. This may also be evident in parents in Class 4 as they had more traditional parenting

beliefs and discipline and lower levels of emotional intimacy. For this class, division of family work responsibility may be less connected to relationship.

Limitations and Suggestions for Future Research

This study is not without limitations. As noted, for the initial phase of data collection, data from fathers was not collected from all 10 sites. Despite my efforts to account for this missing data through full maximum likelihood estimation, this may have introduced bias into my analysis and results. Also, though this data comes from a national study, it is not representative, possibly limiting the generalizability of these results. With the exception of the measure of emotional intimacy, the measures were not collected at more than two or three time points, limiting understanding of change in these constructs over time. Finally, I have used similarity in parenting beliefs, discipline strategies, and report of family work responsibility as indicators of the coparental relationship. Similarity may not fully capture the relationship spouses have as coparents. In some instances, they may "agree to disagree agreeably," thus lack of similarity may not negatively influence the relationship. Additionally, the systemic notion of enmeshment would caution against too much similarity within the couple relationship. Therefore, the effect of similarity in parenting on the couple and marital relationship may be curvilinear, with too much similarity being associated with declines in the couple relationship. Future research should consider the many different dimensions of coparenting, including agreement, solidarity, support/undermining, as well as similarity. In the future, researchers could also consider differences in child outcomes of children from each class/typology. Do children of parents of one class fair better in school readiness, academic achievement, social adjustment, and other child outcomes than those in another class, or are child outcomes similar regardless of class?

Conclusion

Are all stably partnered couples similar? The findings of this study suggest that they are not. Some couples have higher and/or more similar feelings about their emotional intimacy than others. Some have more traditional parenting beliefs, while others are more responsive to their children's needs. Some couples share household labor and childcare fairly equitably, while others take a more traditional gendered approach to family work. There are many differences in the way in which stably partnered individuals negotiate the many roles of family life. In this article, I have explored 4 typologies of couplehood. Is any one typology better than another? Not necessarily. It is hard to say. It is, however, apparent that the couple relationship is complex, dynamic, and interdependent.

References

Ahlander, N. R. and Bahr, K. S. (1995). Beyond drudgery, power, and equity: Toward an expanded discourse on the moral dimensions of housework in families. *Journal of Marriage and the Family, 57*, 54-68.

Bartley, S. J., Blanton, P. W. & Gilliard, J. L. (2005). Husbands and wives in dual-earner marriages: Decision-making, gender role attitudes, division of household labor, and equity. *Marriage & Family Review, 37*(4), 69-94.

Belsky, J., & Hsieh, K. (1998). Patterns of marital change during the early childhood years: Parent personality, coparenting, and division–of–labor correlates. *Journal of Family Psychology, 12*, 511–528.

Bergman, L. R., & Trost, K. (2006). The person–oriented versus the variable–oriented approach: Are they complementary, opposites, or exploring different worlds? *Merrill–Palmer Quarterly*, *52*, 601–632.

Bollen, K. A. (1989). *Structural equations with latent variables*. New York: Wiley.

Bowen, M. (1978). *Family therapy in clinical practice*. New York: Jason Aronson.

Bradbury, T., Fincham, F., & Beach, S. (2000). Research on the nature and determinants of marital satisfaction: A decade in review. *Journal of Marriage & the Family*, *62*, 964–980.

Byrne, B. (2010). *Structural equation modeling with AMOS: Basic concepts, applications, and programming* (2nd ed.). New York: Taylor and Francis Group.

Deal, J., Halverson, J., & Wampler, K. (1999). Parental similarity on child–rearing orientations: effects of stereotype similarity. *Journal of Social & Personal Relationships*, *16*, 87–102.

Feinberg, M. E. (2002). Coparenting and the transition to parenthood: A framework for prevention. *Clinical Child and Family Psychology Review*, *5*, 173–195.

Feinberg, M. E. (2003). The internal structure and ecological context of coparenting: A framework for research and intervention. *Parenting: Science and Practice, 3,* 95–131.

Galovan, A. M., Schramm, D. G., Lee, T. R., & Holmes, E. K. (2010). *Father involvement and family work: Influences on husbands' and wives' marital quality*. Manuscript submitted for publication.

Graham, J. W., Taylor, B. J., & Cumsille, P. E. (2001). Planned missing data designs in analysis of change. In L. Collins & A. Sayer (Eds.), *New methods for the analysis of change* (pp. 335–353). Washington, D.C.: American Psychological Association.

Greenberger, E. & Goldberg, W. (1989). Work, Parenting, and the socialization of children. *Developmental Psychology, 25,* 22–35.

Glysch, R. L., & Vandell, D. L. (1992, March). Associations between family of origin relationships and parental involvement with 1-month-old infants. Paper presented at the meeting of the Southwestern Society for Research in Human Development, Tempe, AZ.

Hawkins, A. J., Christiansen, S. L., Pond-Sargent, K., & Hill, E. J. (1993). Rethinking fathers' involvement in child care: A developmental perspective. *Journal of Family Issues, 14,* 531–549.

Hawkins, A., Lovejoy, K., Holmes, E., Blanchard, V., & Fawcett, E. (2008). Increasing fathers' involvement in child care with a couple–focused intervention during the transition to parenthood. *Family Relations, 57,* 49–59.

Huston, T., & Holmes, E. K. (2004). Becoming parents. In A. Vangelisti (Ed.) *Handbook of family communication* (pp. 105-133). Mahwah, NJ: Lawrence Erlbaum & Associates.

Jung, T., & Wickrama, K. (2008). An introduction to latent class growth analysis and growth mixture modeling. *Social and Personality Psychology Compass, 2,* 302–317.

Kenny, D., Kashy, D., & Cook, W. (2006). *Dyadic data analysis*. New York: Guilford Press.

Kurdek, L. A. (2003). Methodological issues in growth–curve analyses with married couples. *Personal Relations, 10,* 235–266.

Lawrence, E., Rothman, A., Cobb, R., Rothman, M., & Bradbury, T. (2008). Marital satisfaction across the transition to parenthood. *Journal of Family Psychology*, *22*, 41-50.

Lennon, M. C., & Rosenfeld, S. (1994). Relative fairness and the division of housework: The importance of options. *American Journal of Sociology, 100,* 506–531.

McDonald, R. P. (1999). *Test theory: A unified treatment*. Mahwah, NJ: Lawrence Erlbaum.

McHale, J., Kuersten-Hogan, R., & Rao, N. (2004). Growing points for coparenting theory and research. *Journal of Adult Development, 11,* 221–234.

Minuchin, S. (1974). *Families and family therapy.* Cambridge, MA: Harvard University Press.

Muthén, B. (2001). Second-generation structural equation modeling with a combination of categorical and continuous latent variables: New opportunities for latent class/latent growth modeling. In Collins, L. M. & Sayer, A. (Eds.), *New Methods for the Analysis of Change* (pp. 291-322). Washington, D.C.: American Psychological Association.

Muthén, B. (2004). Latent variable analysis: Growth mixture modeling and related techniques for longitudinal data. In D. Kaplan (ed.), *Handbook of quantitative methodology for the social sciences* (pp. 345-368). Newbury Park, CA: Sage Publications.

Muthén, L. K. & Muthén, B. O. (2007). *Mplus user's guide* (5th ed.). Los Angeles: Muthén & Muthén.

NICHD Early Child Care Research Network (1997). Familial factors associated with the characteristics of nonmaternal care for infants. *Journal of Marriage and Family, 59*, 389–408.

Nylund, K. L., Asparouhov, T., & Muthén, B. O. (2007). Deciding on the number of classes in latent class analysis and growth mixture modeling: A monte carlo simulation study. *Structural Equation Modeling*, *14*, 535–569.

O'Brien, M., & Peyton, V. (2002). Parenting attitudes and marital intimacy: A longitudinal analysis. *Journal of Family Psychology*, *16*, 118–127.

Ryan, R. R., Martin, A., & Brooks-Gunn, J. (2006). Is one good parent good enough? Patterns of mother and father parenting and child cognitive outcomes at 24 and 36 months. *Parenting: Science and Practice*, *6*, 211-228.

Schoppe-Sullivan, S., Mangelsdorf, S., Frosch, C., & McHale, J. (2004). Associations between coparenting and marital behavior from infancy to the preschool years. *Journal of Family Psychology*, *18*, 194–207.

Schaefer, E., & Edgarton, M. (1985). Parental and child correlates of parental modernity. In I. E. Sigel (Ed.), Parental belief systems: The psychological consequences for children (pp. 287–318). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Schaefer, M. T. & Olson, D. H. (1981). Assessing intimacy: The pair inventory. *Journal of Marital and Family Therapy*, *7*, 640-653.

Shapiro, A. F., Gottman, J. M., & Carrère, S. (2000). The baby and the marriage: Identifying factors that buffer against decline in marital satisfaction after the first baby arrives. *Journal of Family Psychology*, *14*, 59–70.

Shumow, L. Vandell, D. L., & Posner, J. (1998). Harsh, firm, and permissive parenting in low–income families: Relations to children's academic achievement and behavioral adjustment. *Journal of Family Issues*, *19*, 483–507.

Van Egeren, L. (2004). The development of the coparenting relationship over the transition to parenthood. *Infant Mental Health Journal*, *25*, 453–477.

Van Egeren, L., & Hawkins, D. (2004). Coming to terms with coparenting: Implications of definition and measurement. *Journal of Adult Development*, *11*, 165–178.

Appendix A: Tables

Table 1: *Descriptive Statistics for Study Variables*

	1 Month	**6 Months**	**15 Months**	**2 years**	**3 years**	**54 Months**	**1st Grade**	**3rd Grade**	**4th Grade**	**5th Grade**	**6th Grade**	**15 years**
	M(SD)	*M(SD)*	*M(SD)*	*M(SD)*	*M(SD)*	*M(SD)*	*M(SD)*	*M(SD)*	*M(SD)*	*M(SD)*	*M(SD)*	*M(SD)*
Emotional Intimacy												
Fathers	25.19(3.88)	24.44(4.29)	23.44(4.73)	23.25(4.74)	22.56(4.94)	24.09(4.66)	24.11(5.02)	24.02(4.91)	—	24.08(4.91)	23.85(5.44)	23.67(5.41)
Mothers	24.77(4.14)	24.04(4.50)	23.75(4.66)	22.87(4.94)	23.02(5.22)	23.21(5.13)	23.67(5.21)	23.38(5.24)	—	23.12(5.82)	22.85(5.95)	22.47(5.96)
Family Work Responsibility												
Fathers	—	—	—	—	—	—	14.76(2.58)	—	—	14.90(2.65)	—	—
Mothers	—	—	—	—	—	—	23.50(2.65)	—	—	23.56(2.94)	—	—
Similarity	—	—	—	—	—	—	.52(.24)	—	—	.49(.25)	—	—
Adult-Centered Parenting Beliefs												
Fathers	16.48(4.75)	—	—	—	—	—	16.34(4.74)	—	16.13(4.57)	—	—	—
Mothers	15.63(4.71)	—	—	—	—	—	15.34(4.62)	—	15.13(4.80)	—	—	—
Similarity	.12(.38)	—	—	—	—	—	.10(.37)	—	.08(.38)	—	—	—
Authoritative Discipline Strategies												
Fathers	—	—	—	—	—	26.12(2.39)	26.18(2.41)	25.31(2.34)	—	—	—	—
Mothers	—	—	—	—	—	26.74(2.18)	26.96(1.96)	25.45(2.37)	—	—	—	—
Similarity	—	—	—	—	—	.07(.49)	.05(.46)	.09(.49)	—	—	—	—

Table 2: *Demographic Statistics*

	Mean	(*SD*)
Parents' Education (in years)		
Fathers	15.34	(2.61)
Mothers	15.22	(2.27)
Average Income-to-Needs Ratio		
	4.79	(2.91)
Mother's Age (at 6 months)		
	30.56	(4.63)
Years Married at Baseline		
	5.74	(3.50)
Child's Birth Order *n* (%)		
First born	207	(42.20)
Not first born	283	(57.80)
Child's Ethnicity *n* (%)		
White, non-Hispanic	436	(89.00)
Other	54	(11.00)
Child's Gender *n* (%)		
Male	243	(49.60)
Female	247	(50.40)

Table 3: *Partial Correlations Among Intercept and Slope Variables*

	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. Mother Emotional Intimacy Intercept	—								
2. Mother Emotional Intimacy Slope (Stage 1)	.61	—							
3. Mother Emotional Intimacy Slope (Stage 2)	–.14	–.67**	—						
4. Mother Emotional Intimacy Slope (Stage 3)	–.14	.20	–.02	—					
5. Father Emotional Intimacy Intercept	.51**	.40	–.02	–.03	—				
6. Father Emotional Intimacy Slope (Stage 1)	.21	–.21	.01	.30	.47	—			
7. Father Emotional Intimacy Slope (Stage 2)	–.11	.37	.42†	–.32	.00	–.60*	—		
8. Father Emotional Intimacy Slope (Stage 3)	.15	–.10	–.11	.95**	–.12	.13	–.04	—	
9. Family Work Responsibility Similarity Intercept	.02	.01	–.03	–.04	.00	–.03	.05	–.10	—
10. Family Work Responsibility Similarity Slope	–.01	.04	.00	.02	.00	.03	–.04	.06	–.95**
11. Mother Family Work Responsibility Intercept	.05	.19	.01	.06	.15	.18	–.23	.23†	–.09
12. Mother Family Work Responsibility Slope	–.04	–.16	–.05	–.07	–.11	–.21	.17	–.22	.11†
13. Father Family Work Responsibility Intercept	–.24**	.18	–.17†	.20†	–.23*	–.01	.20	–.10	–.17**
14. Father Family Work Responsibility Slope	.08	–.25	.14	–.27*	.13	–.07	–.16	.02	.16**
15. Adult–centered Parenting Beliefs Similarity Intercept	–.01	–.21	.20*	–.16	.07	–.23	.13	–.11	–.11*
16. Mother Adult–centered Parenting Beliefs Intercept	.05	–.06	.12	.07	.01	–.11	.16	.11	–.01
17. Mother Adult–centered Parenting Beliefs Slope	.06	–.06	–.04	–.18	–.13	.27	–.41*	.18	.03
18. Father Adult–centered Parenting Beliefs Intercept	–.10	–.49	.41*	–.35†	–.18	–.34	.27	.03	.04
19. Authoritative Discipline Similarity Intercept	.33*	.27	–.18	–.14	.43*	–.07	–.29	–.11	–.04
20. Authoritative Discipline Similarity Slope (Stage 1)	–.32†	–.16	.14	.14	–.32	.38	.17	.03	.02
21. Authoritative Discipline Similarity Slope (Stage 2)	.04	.30	.03	–.14	.29†	–.65	.57*	.04	.10
22. Mother Authoritative Discipline Intercept	.03	.23	–.32†	.40†	–.13	.31	–.04	–.37	.09
23. Mother Authoritative Discipline Slope (Stage 1)	.16	–.21	.39†	–.54†	.18	–.40	.20	.35	–.12
24. Mother Authoritative Discipline Slope (Stage 2)	.06	.08	–.06	.38†	–.12	.22	.19	–.10	.05
25. Father Authoritative Discipline Intercept	.09	–.21	.02	.16	–.02	–.11	.08	–.01	.05
26. Father Authoritative Discipline Slope (Stage 1)	–.06	.17	–.02	–.16	.05	.11	–.10	.01	–.05
27. Father Authoritative Discipline Slope (Stage 2)	–.06	.14	–.09	.07	–.11	.08	–.04	.13	.06

Notes. $N = 490$. The partial correlations between variables take into account each variable's relationships with all other variables. Variances for the slopes of Father Adult–centered Parenting Beliefs and Adult–centered Parenting Beliefs Similarity were small and non–significant. Therefore the variance for each was fixed at zero. In doing so, all correlations with these two variables were necessarily set to zero, thus they are not included in the table.

† $p < .10$, * $p < .05$, ** $p < .01$.

Table 3: *Partial Correlations Among Intercept and Slope Variables* (continued)

	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.
1.																		
2.																		
3.																		
4.																		
5.																		
6.																		
7.																		
8.																		
9.																		
10.	—																	
11.	.14*	—																
12.	–.13*	–.86**	—															
13.	.12*	–.51**	.39**	—														
14.	–.15**	.41**	–.52**	–.82**	—													
15.	.07	–.05	.07	.05	–.02	—												
16.	–.02	–.07	.07	.07	–.07	.43**	—											
17.	–.04	.09	–.11	.04	–.05	–.01	–.14	—										
18.	.01	–.03	.04	.03	–.11	–.04	.13	.02	—									
19.	.03	–.10	.11	–.04	–.01	–.03	–.14	–.02	–.19	—								
20.	–.02	.15	–.14	.05	.04	.00	.10	.01	.11	–.77**	—							
21.	–.06	.03	–.01	–.15	.02	.17†	.15	–.04	.05	–.18	–.12	—						
22.	–.07	–.19	.20	–.10	.08	–.21*	–.01	.04	–.03	.34	–.29	–.04	—					
23.	.12	.26	–.25	.00	–.01	.27†	–.02	–.17	.05	–.33	.33	.15	–.85**	—				
24.	–.05	–.12	.04	.19†	–.12	.07	.21*	–.01	–.21	–.12	.11	.20	–.05	.01	—			
25.	–.04	–.01	–.02	–.01	.03	–.05	.02	–.04	.05	.06	–.03	–.04	.03	–.03	–.03	—		
26.	.04	.03	.01	–.01	–.01	.04	–.04	.03	–.05	–.02	–.01	.03	–.04	.04	.01	–.98**	—	
27.	–.08	–.01	–.02	.02	–.01	.06	.13*	.03	.06	–.16	.15	.04	–.08	.08	.08	.37**	–.47**	—

Table 4: *Estimated Means and Standard Deviations for LGC Intercept and Slope Variables*

	Mean	SD
Mothers' Emotional Intimacy Intercept	24.751**	2.903**
Mothers' Emotional Intimacy Slope (Stage 1)	–0.981**	0.961
Mothers' Emotional Intimacy Slope (Stage 2)	0.135**	0.475**
Mothers' Emotional Intimacy Slope (Stage 3)	–0.064**	0.148**
Fathers' Emotional Intimacy Intercept	25.237**	2.773**
Fathers' Emotional Intimacy Slope (Stage 1)	–1.086**	1.045
Fathers' Emotional Intimacy Slope (Stage 2)	0.171**	0.374*
Fathers' Emotional Intimacy Slope (Stage 3)	–0.037**	0.148*
Fathers' Family Work Intercept	14.428**	4.439**
Fathers' Family Work Slope	0.040	0.453**
Mothers' Family Work Intercept	23.303**	4.278**
Mothers' Family Work Slope	0.023	0.447**
Similarity in Family Work Intercept	0.588**	0.637**
Similarity in Family Work Slope	–0.010**	0.071**
Fathers' Parenting Beliefs Intercept	16.275**	4.051**
Fathers' Parenting Beliefs Slope [a]	–0.005	0.045
Mothers' Parenting Beliefs Intercept	15.655**	4.115**
Mothers' Parenting Beliefs Slope	–0.054**	0.263*
Similarity in Parenting Beliefs Intercept	0.118**	0.230
Similarity in Parenting Beliefs Slope [a]	–0.004	0.032
Fathers' Discipline Strategies Intercept	26.013**	3.052**
Fathers' Discipline Strategies Slope (Stage 1)	0.023	0.449**
Fathers' Discipline Strategies Slope (Stage 2)	–0.102**	0.161**
Mothers' Discipline Strategies Intercept	26.241**	3.019**
Mothers' Discipline Strategies Slope (Stage 1)	0.111*	0.406*
Mothers' Discipline Strategies Slope (Stage 2)	–0.177**	0.138**
Similarity in Discipline Strategies Intercept	0.121	1.803**
Similarity in Discipline Strategies Slope (Stage 1)	–0.011	0.318**
Similarity in Discipline Strategies Slope (Stage 2)	0.005	0.077**

Notes: Means and standard deviations are for the model that included control variables. Significant variability indicates unexplained heterogeneity within the sample. Asterisks for Standard Deviations indicate variance significance levels. As significance levels are not provided for means and variances of endogenous variables, the significance levels reported here are for the model without control variables: * $p < .05$, ** $p < .01$.

[a] Variance set to zero in the overall latent growth model.

Table 5: *Latent Class Enumeration Statistics*

# of Classes	Loglikelihood	BIC	Lo-Mendel-Rubin (*p*-value)
1	-51934.19	104450.66	—
2	-47644.82	96057.75	0.00
3	-46594.68	93497.35	0.03
4	-45983.50	93106.78	0.38
5	-51934.19	105193.99	0.77

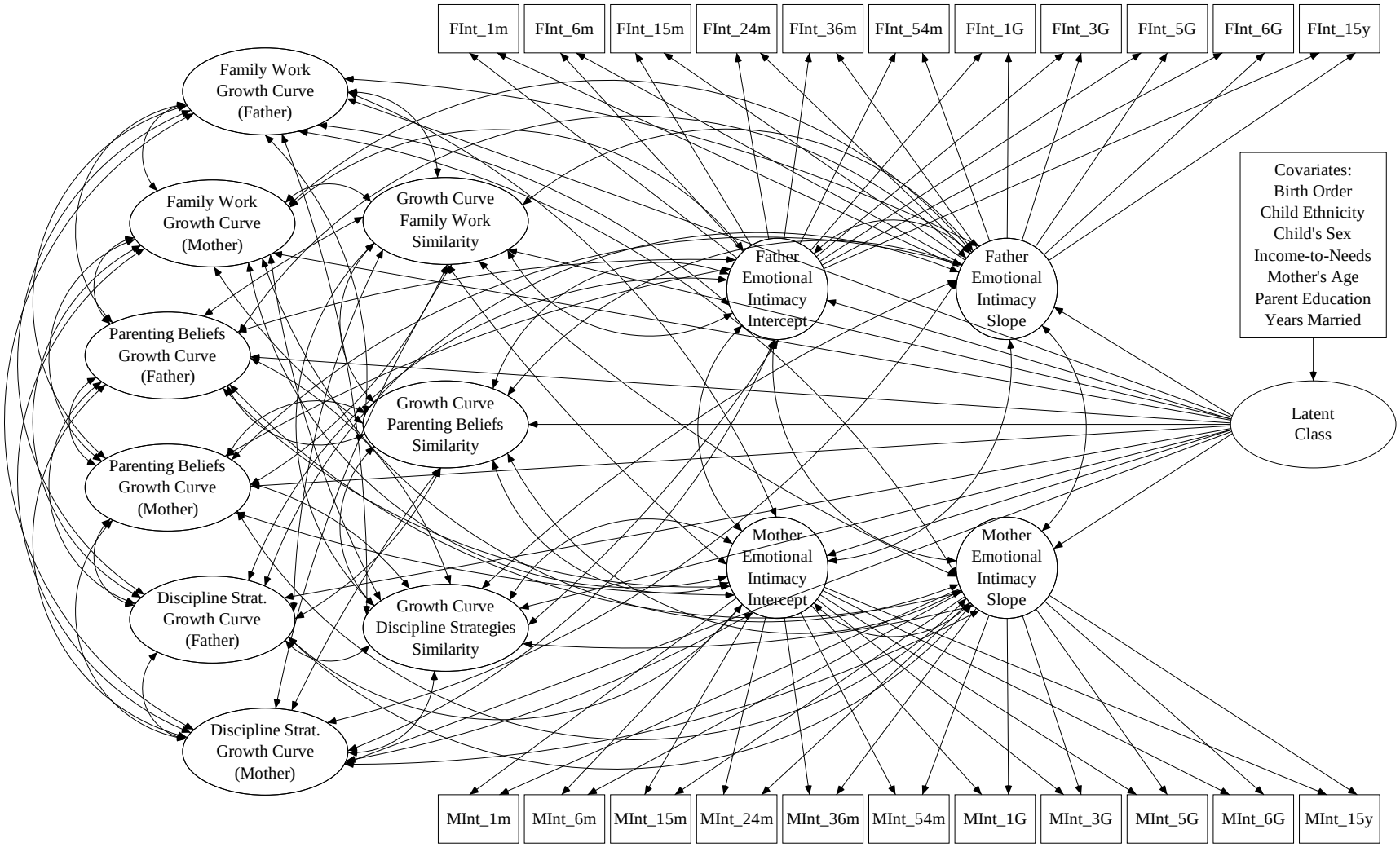
Table 6: *Means and Standard Deviations by Class*

	Class 1 (a) *n* = 99		Class 2 (b) *n* = 144		Class 3 (c) *n* = 145		Class 4 (d) *n* = 102		*F*-value
	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	
Mother's Emotional Intimacy Intercept	23.43[b,c]	(2.42)	26.45[a,c,d]	(1.81)	25.49[a,b,d]	(2.59)	22.59[b,c]	(2.55)	69.30**
Mother's Emotional Intimacy Slope (Stage 1)	-1.18[b,c]	(.89)	-.63[a,d]	(.85)	-.86[a,d]	(.87)	-1.43[b,c]	(.99)	18.30**
Mother's Emotional Intimacy Slope (Stage 2)	.12	(.34)	.13	(.37)	.19	(.34)	.08	(.38)	1.76
Mother's Emotional Intimacy Slope (Stage 3)	-.06	(.10)	-.05[d]	(.12)	-.06[d]	(.11)	-.10[b,c]	(.13)	3.76*
Father's Emotional Intimacy Intercept	24.23[b,c]	(2.61)	26.38[a,d]	(2.11)	25.92[a,d]	(2.23)	23.68[b,c]	(2.45)	37.30**
Father's Emotional Intimacy Slope (Stage 1)	-1.11[d]	(.83)	-.88[d]	(.88)	-.96[d]	(.84)	-1.53[a,b,c]	(1.03)	12.05**
Father's Emotional Intimacy Slope (Stage 2)	.18	(.31)	.22	(.27)	.13	(.32)	.15	(.34)	2.14†
Father's Emotional Intimacy Slope (Stage 3)	-.04	(.11)	-.04	(.12)	-.03	(.10)	-.05	(.13)	.65
Father's Family Work Intercept	12.01[b,c,d]	(3.22)	14.01[a,c]	(2.91)	16.50[a,b,d]	(3.21)	14.40[a,c]	(4.37)	35.23**
Father's Family Work Slope	-.01	(.34)	.00	(.31)	.07	(.37)	.11	(.47)	2.50†
Mother's Family Work Intercept	25.67[b,c,d]	(3.07)	23.41[a,c]	(3.36)	20.86[a,b,d]	(3.08)	24.33[a,c]	(3.79)	46.21**
Mother's Family Work Slope	.10[c]	(.34)	.05	(.37)	-.03[a]	(.34)	-.01	(.45)	2.86*
Similarity in Family Work Intercept	.60	(.59)	.56	(.59)	.64	(.56)	.54	(.68)	.59
Similarity in Family Work Slope	-.02	(.07)	-.01	(.07)	-.01	(.06)	-.01	(.08)	.50
Father's Adult-Centered Parenting Intercept	16.28	(3.59)	15.40[d]	(3.80)	16.57	(4.31)	17.40[b]	(3.78)	5.46**
Father's Adult-Centered Parenting Slope	.00[c]	(.07)	-.01	(.07)	-.03[a,d]	(.06)	.00[c]	(.06)	4.18**
Mother's Adult-Centered Parenting Intercept	15.73	(3.51)	14.76[d]	(3.82)	15.94	(4.07)	16.39[b]	(4.03)	4.04**
Mother's Adult-Centered Parenting Slope	-.06	(.24)	-.06	(.22)	-.06	(.20)	-.01	(.23)	1.43
Similarity in Adult-Centered Parenting Intercept	.11	(.10)	.10	(.10)	.13	(.10)	.13	(.10)	2.52†
Similarity in Adult-Centered Parenting Slope	.00	(.01)	.00	(.01)	.00	(.01)	.00	(.01)	.14
Father's Authoritative Dis. Intercept	25.46[b,c]	(2.14)	26.95[a,d]	(1.84)	26.30[a,d]	(2.16)	24.85[b,c]	(2.30)	23.08**
Father's Authoritative Dis. Slope (Stage 1)	.03	(.26)	.01[d]	(.27)	-.04[d]	(.30)	.12[b,c]	(.31)	6.37**
Father's Authoritative Dis. Slope (Stage 2)	-.13[c]	(.12)	-.11	(.12)	-.07[a]	(.12)	-.10	(.14)	4.83**
Mother's Authoritative Dis. Intercept	26.03[b,d]	(2.35)	27.19[a,b,d]	(2.20)	26.33[b,d]	(2.11)	24.99[a,b,c]	(2.75)	17.96**
Mother's Authoritative Dis. Slope (Stage 1)	.06[d]	(.31)	.07[d]	(.28)	.13	(.29)	.19[a,b]	(.36)	3.78*
Mother's Authoritative Dis. Slope (Stage 2)	-.15[c]	(.08)	-.17[c]	(.08)	-.20[a,b]	(.09)	-.18	(.10)	5.40**
Similarity in Authoritative Dis. Intercept	.05	(1.70)	.26	(1.75)	-.03	(1.72)	.20	(1.71)	.81
Similarity in Authoritative Dis. Slope (Stage 1)	-.01	(.31)	-.02	(.30)	.01	(.30)	-.03	(.30)	.62
Similarity in Authoritative Dis. Slope (Stage 2)	.01	(.07)	-.01[d]	(.07)	.01	(.08)	.02[b]	(.07)	3.30*
Average Income-to-Needs Ratio	4.77	(2.71)	5.55[c,d]	(3.56)	4.38[b]	(2.23)	4.31[b]	(2.76)	5.66**
Child's Birth Order (0 = Not first born, 1 = first born)	.40	(.49)	.44	(.50)	.39	(.49)	.45	(.50)	.50
Child's Sex (0=Male, 1=Female)	.62	(.49)	.47	(.50)	.46	(.50)	.51	(.50)	2.40†
Father's Education (in years)	15.31	(2.57)	15.81[c]	(2.91)	14.94[b]	(2.44)	15.25	(2.37)	3.28*
Mother's Education (in years)	14.90	(1.97)	15.53	(2.21)	15.34	(2.40)	14.92	(2.38)	3.04*
Mother's Age at Baseline	30.99	(4.68)	30.60	(4.50)	30.16	(4.91)	30.66	(4.36)	.42
Number of Years Married (at 6 months)	5.62	(3.33)	5.78	(3.53)	5.59	(3.34)	6.00	(3.87)	.31
Phase One Site Missingness (0 = no miss., 1 = miss.)	.36	(.48)	.44	(.50)	.37	(.49)	.34	(.48)	1.14
Race (0 = White, non-Hispanic, 1 = Ethnic Minority)	.06[c]	(.24)	.08	(.27)	.18[a]	(.38)	.11	(.31)	3.54*

Notes. Alphabetic superscripts indicate differences between group mean scores that are statistically significant at the $p < .05$ level. Significance levels for ANOVA follow up tests to the MANOVA: † $p < .10$, * $p < .05$, ** $p < .01$.

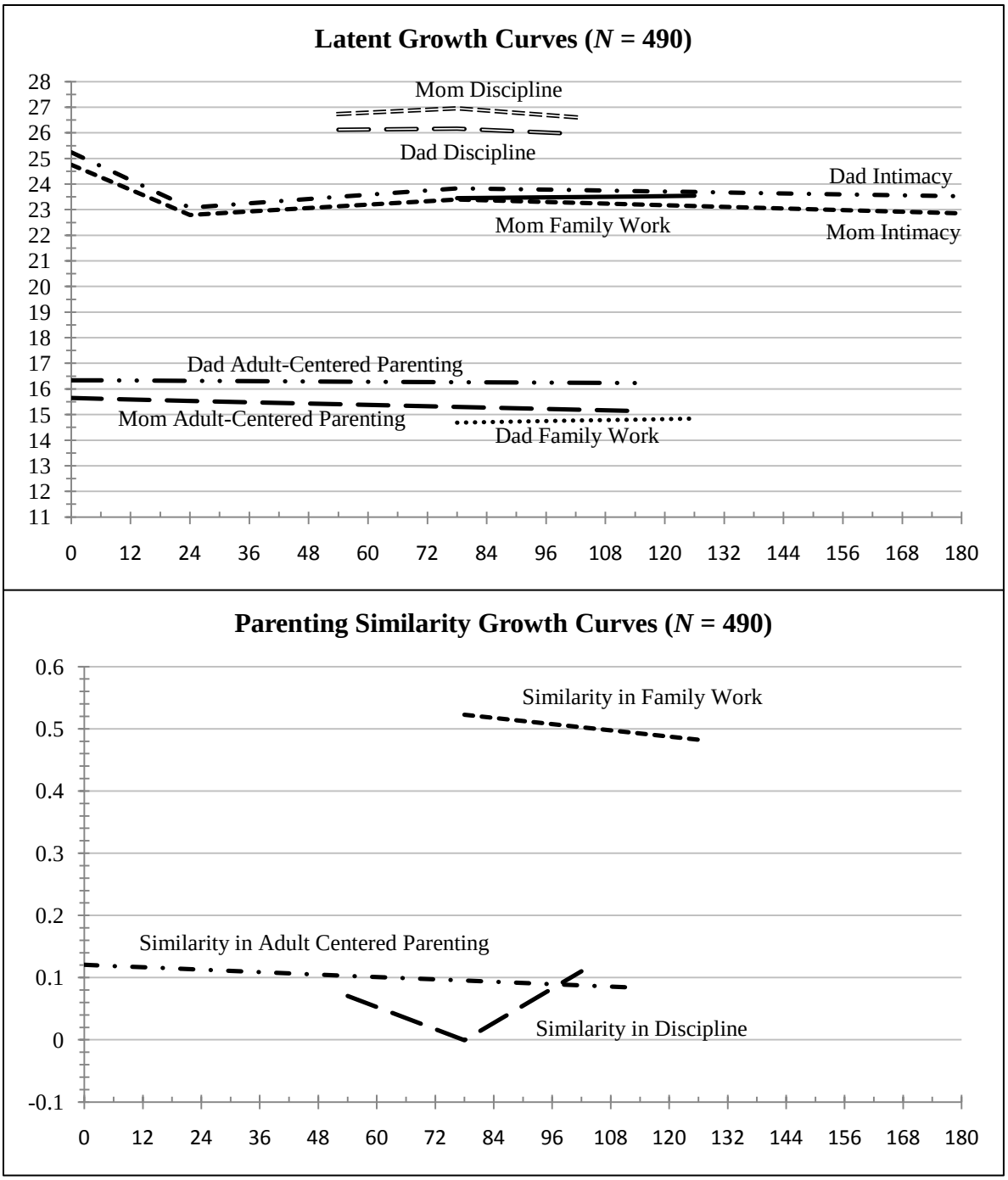
Appendix B: Figures

Figure 1: *Proposed Model*



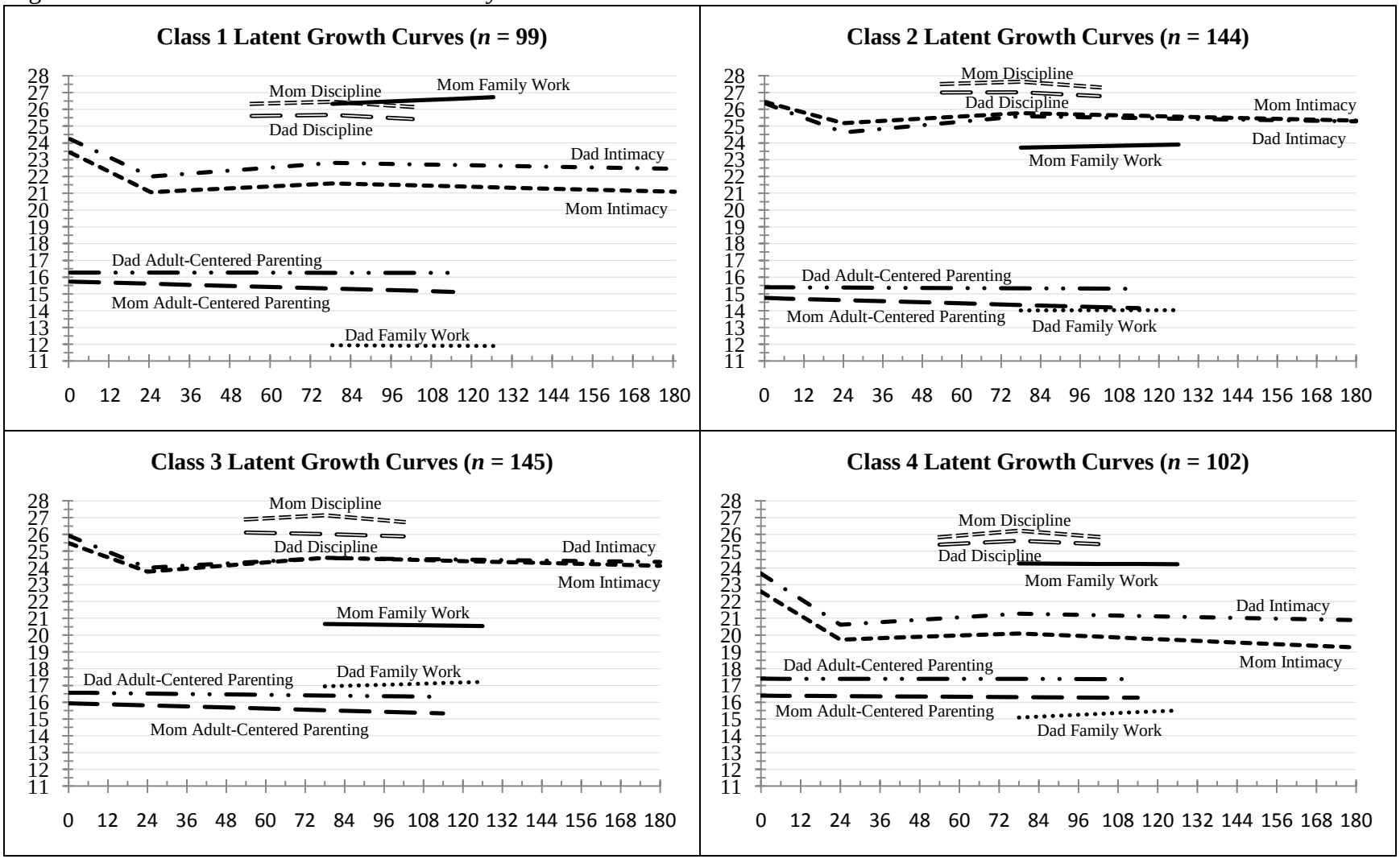
Notes. For parsimony in viewing the proposed model, complete growth curves are not shown for all variables, nor is the piecewise growth curve for emotional intimacy or discipline strategies. Likewise, correlations to account for shared method variance and paths from the control variables to all slope and intercept variables are not shown.

Figure 2: *Mother, Father, and Parenting Similarity (Coparenting) Latent Growth Curves*



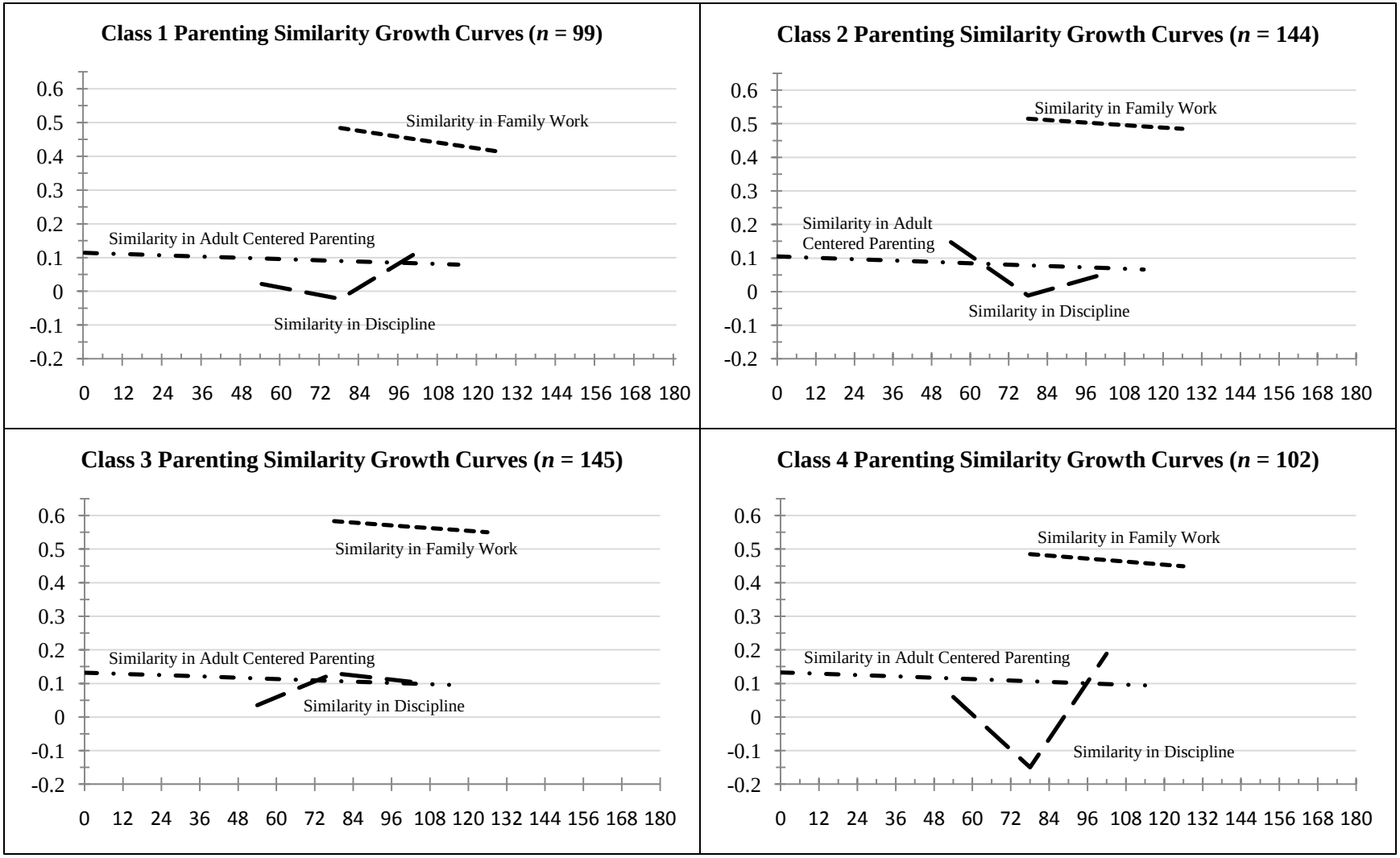
Notes. Time on the x-axis is in months. Not all curves cover the entire time range due to timing of measurement. The transition point in the piecewise model for authoritative discipline is 1st grade. Transition points in the piecewise model for emotional intimacy are age 2 and 1st grade.

Figure 3: *Mother and Father Growth Curves by Class*



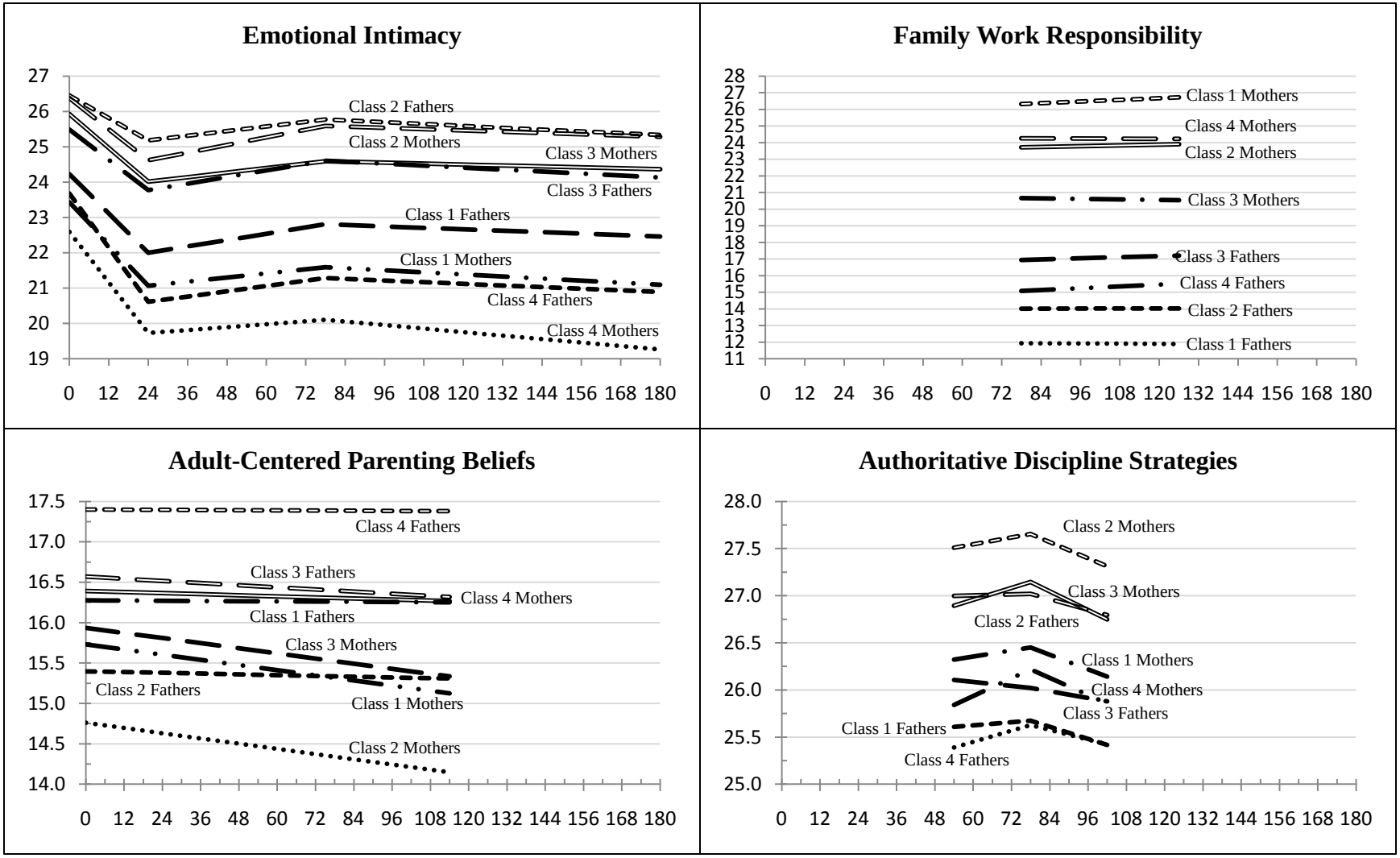
Notes. Time on the x-axis is in months. Not all curves cover the entire time range due to timing of measurement. The transition point in the piecewise model for authoritative discipline is 1st grade. Transition points in the piecewise model for emotional intimacy are age 2 and 1st grade.

Figure 4: *Similarity Growth Curves by Class*



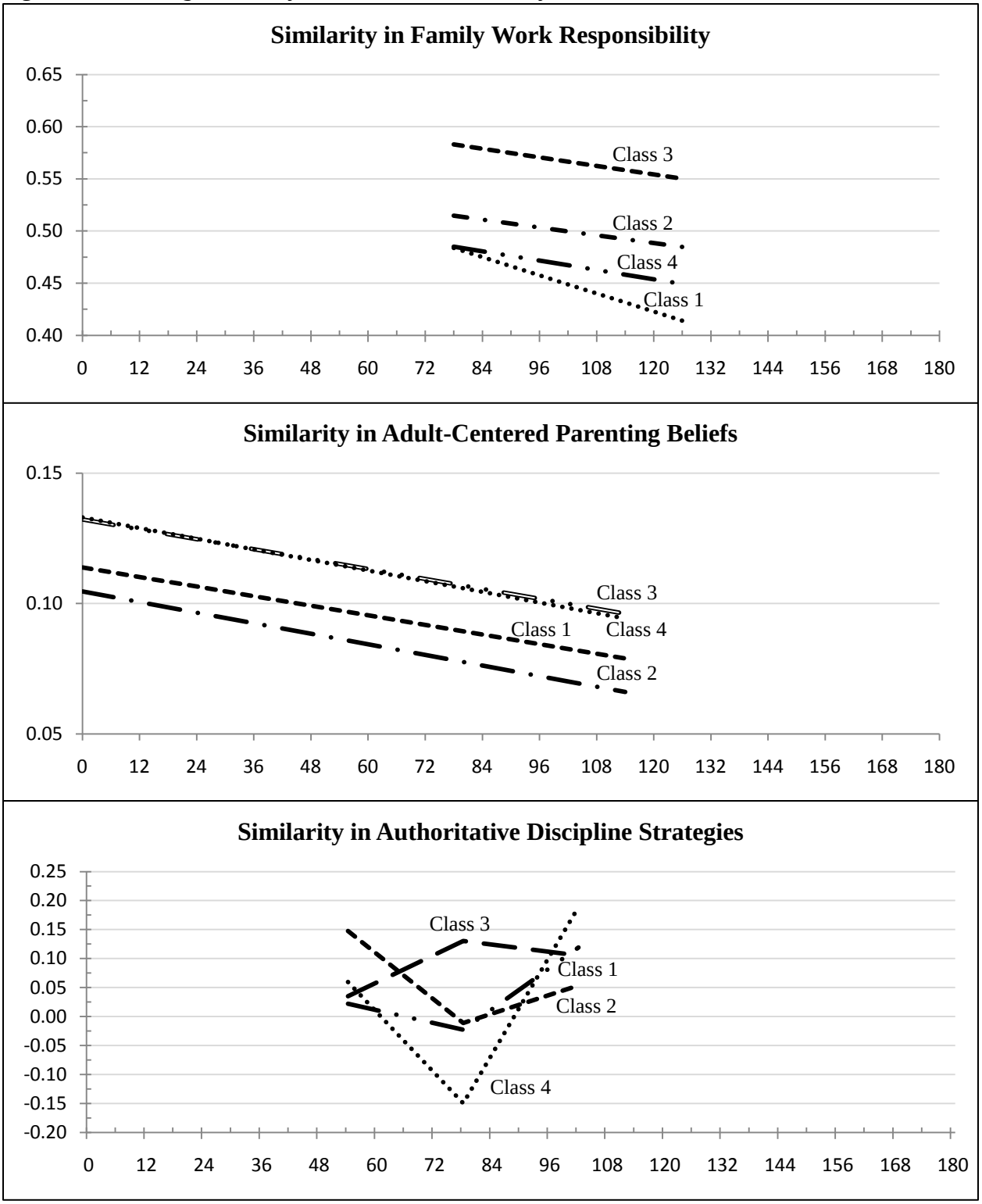
Notes. Time on the x-axis is in months. Not all curves cover the entire time range due to timing of measurement. The transition point in the piecewise model for authoritative discipline is 1st grade.

Figure 5: *Mother and Father Class Growth Curves by Construct*



Notes. Time on the x-axis is in months. Not all curves cover the entire time range due to timing of measurement. Transition points in the piecewise model for emotional intimacy are age 2 and 1st grade. The transition point in the piecewise model for authoritative discipline is 1st grade. Class 1 n = 99; Class 2 n = 144; Class 3 n = 145; Class 4 n = 102.

Figure 6: *Parenting Similarity Class Growth Curves by Construct*



Notes. Time on the x-axis is in months. Not all curves cover the entire time range due to timing of measurement. The transition point in the piecewise model for authoritative discipline is 1st grade. Class 1 *n* = 99; Class 2 *n* = 144; Class 3 *n* = 145; Class 4 *n* = 102.

Appendix C: SPSS and Mplus Syntax

SPSS Syntax for Computing Intraclass Correlation

```
* Get the file and keep the id and selected variables.
GET FILE='C:\Users\Owner\Documents\Items 1 month, 1st, 4th Dad and
Mom Matched Parental Modernity.sav'
/keep=id IDSG1X05 IDSG1X10 IDSG1X12 IDSG1X16 IDSG1X18 IDSG1X21 IDSG1X24
IDSG1X26 IDSG1X28 IDSG1M05 IDSG1M10 IDSG1M12 IDSG1M16 IDSG1M18 IDSG1M21
IDSG1M24 IDSG1M26 IDSG1M28.

* Get the means for each variable.
FREQUENCIES IDSG1X05 IDSG1X10 IDSG1X12 IDSG1X16 IDSG1X18 IDSG1X21
IDSG1X24 IDSG1X26 IDSG1X28 IDSG1M05 IDSG1M10 IDSG1M12 IDSG1M16 IDSG1M18
IDSG1M21 IDSG1M24 IDSG1M26 IDSG1M28
/statistics = mean.

* Compute the mean adjusted scores for each person to adjust for stereotype accuracy.
* Take the statistics output from frequencies command above to create 'compute' syntax below.
COMPUTE IDSG1X05_m=IDSG1X05-1.82692307692308.
COMPUTE IDSG1X10_m=IDSG1X10-2.39148351648352.
COMPUTE IDSG1X12_m=IDSG1X12-2.94093406593407.
COMPUTE IDSG1X16_m=IDSG1X16-2.82142857142857.
COMPUTE IDSG1X18_m=IDSG1X18-2.38461538461538.
COMPUTE IDSG1X21_m=IDSG1X21-4.09752747252747.
COMPUTE IDSG1X24_m=IDSG1X24-2.96153846153846.
COMPUTE IDSG1X26_m=IDSG1X26-3.46565934065934.
COMPUTE IDSG1X28_m=IDSG1X28-2.66208791208791.
COMPUTE IDSG1M05_m=IDSG1M05-1.61126373626374.
COMPUTE IDSG1M10_m=IDSG1M10-2.27335164835165.
COMPUTE IDSG1M12_m=IDSG1M12-2.74313186813187.
COMPUTE IDSG1M16_m=IDSG1M16-2.76510989010989.
COMPUTE IDSG1M18_m=IDSG1M18-2.11538461538462.
COMPUTE IDSG1M21_m=IDSG1M21-3.97664835164835.
COMPUTE IDSG1M24_m=IDSG1M24-2.62225274725275.
COMPUTE IDSG1M26_m=IDSG1M26-3.22527472527473.
COMPUTE IDSG1M28_m=IDSG1M28-2.48489010989011.
EXECUTE .

* Restructure the data to allow for computation of the intraclass correlation.  Items equal the
number of items in the scale.
VARSTOCASES
  /MAKE Father FROM IDSG1X05_m IDSG1X10_m IDSG1X12_m IDSG1X16_m IDSG1X18_m
IDSG1X21_m IDSG1X24_m IDSG1X26_m IDSG1X28_m
  /MAKE Mother FROM IDSG1M05_m IDSG1M10_m IDSG1M12_m IDSG1M16_m
IDSG1M18_m IDSG1M21_m IDSG1M24_m IDSG1M26_m IDSG1M28_m
  /INDEX=item(9)
  /KEEP=ID
  /NULL=KEEP.
```

* **Split the file by each couple and compute the Intraclass Correlation.**

```
sort cases by id.
split file by id.
RELIABILITY
  /VARIABLES=Father Mother
  /SCALE('ALL VARIABLES')  ALL/MODEL=PARALLEL
  /ICC=MODEL(MIXED) TYPE(CONSISTENCY) CIN=95 TESTVAL=0
  /matrix=out(*).
split file off.
```

* **Remove excess rows to allow for merging with the dataset.**

```
select if rowtype_="CORR".
select if varname_="Father".
execute.
add files file=* /keep=id mother.
execute.
```

* **Rename the "mother" variable to label it as the ICC.**

```
COMPUTE TradG1_ICC=mother.
execute.
add files file=* /keep=id TradG1_ICC.
execute.
frequencies TradG1_ICC /histogram normal.
```

* **Save the dataset and merge it with the overall data matching by the ID variable.**
* **Repeat the process for each time point and each variable.**

SPSS Syntax to Convert SPSS Data to Mplus Data

* **Recode the missing values before exporting to Mplus.**
RECODE
ID SITE fathmiss MARYRS06 CSEX_M01 CSEX CRACEM01 CHISPM01 MSTATM01 MAGE_M01 CBORDM01 MEDUCM01 PEDUCM01 INCNTave RACE2 FInt_1m FInt_6m FInt_15m FInt_24m FInt_36m FInt_54m FInt_1G FInt_3G FInt_5G FInt_6G FInt_15y Mint_1m Mint_6m Mint_15m Mint_24m Mint_36m Mint_54m Mint_1G Mint_3G Mint_5G Mint_6G Mint_15y FamWrkG1_ICC FamWrkG5_ICC FFW1G MFW1G FFW5G MFW5G Trad01_ICC TradG1_ICC TradG4_ICC TradF1m TradF1g TradF4g TradM1m TradM1g TradM4g TradF1mrec TradF1grec TradF4grec TradM1mrec TradM1grec TradM4grec Disp54ICC Disp1gICC Disp3gICC fDisp54m fDisp1g fDisp3g mDisp54m mDisp1g mDisp3g HP54ICC HP1gICC HP3gICC fHP54m fHP1g fHP3g mHP54m mHP1g mHP3g RACE Black Hispanic Other fHP54mr fHP1gr fHP3gr mHP54mr mHP1gr mHP3gr Married Father Partner CBORD_OR FFW1Grec FFW5Grec MFW1Grec MFW5Grec fDisp54mrec fDisp1grec fDisp3grec mDisp54mrec mDisp1grec mDisp3grec
(missing=-999) (else=copy).

* **Tell SPSS that -999 is missing**.
MISSING VALUES ALL (-999).
EXECUTE.

* **Write out a file suitable for Mplus. The first number in parentheses is the number of variables. The rest is for formatting.**
WRITE outfile 'C:\Users\Owner\Documents\Thesis.txt'
/ ID SITE fathmiss MARYRS06 CSEX_M01 CSEX CRACEM01 CHISPM01 MSTATM01 MAGE_M01 CBORDM01 MEDUCM01 PEDUCM01 INCNTave RACE2 FInt_1m FInt_6m FInt_15m FInt_24m FInt_36m FInt_54m FInt_1G FInt_3G FInt_5G FInt_6G FInt_15y Mint_1m Mint_6m Mint_15m Mint_24m Mint_36m Mint_54m Mint_1G Mint_3G Mint_5G Mint_6G Mint_15y FamWrkG1_ICC FamWrkG5_ICC FFW1G MFW1G FFW5G MFW5G Trad01_ICC TradG1_ICC TradG4_ICC TradF1m TradF1g TradF4g TradM1m TradM1g TradM4g TradF1mrec TradF1grec TradF4grec TradM1mrec TradM1grec TradM4grec Disp54ICC Disp1gICC Disp3gICC fDisp54m fDisp1g fDisp3g mDisp54m mDisp1g mDisp3g HP54ICC HP1gICC HP3gICC fHP54m fHP1g fHP3g mHP54m mHP1g mHP3g RACE Black Hispanic Other fHP54mr fHP1gr fHP3gr mHP54mr mHP1gr mHP3gr Married Father Partner CBORD_OR FFW1Grec FFW5Grec MFW1Grec MFW5Grec fDisp54mrec fDisp1grec fDisp3grec mDisp54mrec mDisp1grec mDisp3grec
(100(f8.6,1x)).
EXECUTE.

Mplus Syntax for Conducting a Latent Class Growth Analysis

```
! Specify a title for the analysis;
TITLE: Mplus Latent Class Systemic Growth Curves

! Indicate the data file to use for the analysis.
DATA: FILE = Thesis.txt;

! Name all of the variables in the dataset;
VARIABLE: NAMES ARE
  ID SITE fathmiss MARYRS06 CSEX_M01 CSEX CRACEM01 CHISPM01
   MSTATM01 MAGE_M01 CBORDM01 MEDUCM01 PEDUCM01 INCNTave
  FInt_1m FInt_6m FInt_15m FInt_24m FInt_36m FInt_54m
   FInt_1G FInt_3G FInt_5G FInt_6G FInt_15y
  Mint_1m Mint_6m Mint_15m Mint_24m Mint_36m Mint_54m
   Mint_1G Mint_3G Mint_5G Mint_6G Mint_15y
  FWkG1ICC FWkG5ICC FFW1G MFW1G FFW5G MFW5G
  TPB01ICC TPBG1ICC TPBG4ICC
   TradF1m TradM1m TradF1g TradM1g TradF4g TradM4g
  PDS54ICC PDS1gICC PDS3gICC
   fDisp54m fDisp1g fDisp3g mDisp54m mDisp1g mDisp3g
  HP54ICC HP1gICC HP3gICC fHP54m fHP1g fHP3g mHP54m mHP1g mHP3g
  RACE Black Hispanic Other
  fHP54mr fHP1gr fHP3gr mHP54mr mHP1gr mHP3gr
  Married Father Partner
  CBORD_OR FFW1Grec FFW5Grec MFW1Grec MFW5Grec
  fDsp54mr fDsp1gr fDsp3gr mDsp54mr mDsp1gr mDsp3gr RACE2;

! Specify the number of classes to estimate;
  Classes = c(4);

! Indicate variables used in the analysis;
USEVARIABLES ARE
   Mint_1m Mint_6m Mint_15m Mint_24m Mint_36m Mint_54m
    Mint_1G Mint_3G Mint_5G Mint_6G Mint_15y
   FInt_1m FInt_6m FInt_15m FInt_24m FInt_36m FInt_54m
    FInt_1G FInt_3G FInt_5G FInt_6G FInt_15y
   FWkG1ICC FWkG5ICC
   FFW1G FFW5G
   MFW1G MFW5G
   TPB01ICC TPBG1ICC TPBG4ICC
   TradF1m TradF1g TradF4g
   TradM1m TradM1g TradM4g
   PDS54ICC PDS1gICC PDS3gICC
   fDisp54m fDisp1g fDisp3g
   mDisp54m mDisp1g mDisp3g;
```

! Specify which variable is the ID variable;
IDVARIABLE IS ID;

! Indicate what value represents a missing value;
Missing are all (-999);

! Convert scales to the same metric;
DEFINE:
MFW1G=(MFW1G/24)*6;
MFW5G=(MFW5G/24)*6;
FFW1G=(FFW1G/24)*6;
FFW5G=(FFW5G/24)*6;
TradF1m=(TradF1m/9)*6;
TradF1g=(TradF1g/9)*6;
TradF4g=(TradF4g/9)*6;
TradM1m=(TradM1m/9)*6;
TradM1g=(TradM1g/9)*6;
TradM4g=(TradM4g/9)*6;
fDisp54m=fDisp54m*1.25;
fDisp1g=fDisp1g*1.25;
fDisp3g=fDisp3g*1.25;
mDisp54m=mDisp54m*1.25;
mDisp1g=mDisp1g*1.25;
mDisp3g=mDisp3g*1.25;

ANALYSIS:
! Specify a mixture model analysis;
TYPE = MIXTURE;
! Specify the number of random starts and final stage iterations;
STARTS = 250 15;
! Specify the number of random starts and final stage iterations for the Lo-Mendel-Rubin test;
K-1STARTS = 100 10;
! Set random starts scale. Default is 5;
STSCALE = 1;
! Specify convergence criterion. Default is .001;
MCONVERGENCE = .01;
! Set the absolute observed data loglikelihood change convergence criterion.
LOGCRITERION = .001; **! Default = .0000001;**
! Set the relative observed data loglikelihood change convergence criterion.
RLOGCRITERION = .000001; **! Default = .0000001;**
! Specify that Mplus use a specific number of processors. Default = 1;
PROCESSORS = 4 (STARTS);
! Allows for interruption of estimation, respecification of random starts, etc (see Mplus Users Guide for more information);
INTERACTIVE = control.dat;

MODEL:
! Specify the overall model;
%OVERALL%
! Piecewise Intimacy Growth Curves;
! Mother Stage 1;
i1 ms1 | Mint_1m@0 Mint_6m@.5 Mint_15m@1.25 Mint_24m@2
Mint_36m@2 Mint_54m@2 Mint_1G@2 Mint_3G@2 Mint_5G@2 Mint_6G@2 Mint_15y@2;
! Mother Stage 2;
i1 ms2 | Mint_1m@0 Mint_6m@0 Mint_15m@0 Mint_24m@0
Mint_36m@3 Mint_54m@4.5 Mint_1G@6.5 Mint_3G@6.5 Mint_5G@6.5 Mint_6G@6.5
Mint_15y@6.5;
! Mother Stage 3;
i1 ms3 | Mint_1m@0 Mint_6m@0 Mint_15m@0 Mint_24m@0
Mint_36m@0 Mint_54m@0 Mint_1G@0 Mint_3G@8.5 Mint_5G@10.5 Mint_6G@11.5
Mint_15y@15;
! Father Stage 1;
i2 fs1 | FInt_1m@0 FInt_6m@.5 FInt_15m@1.25 FInt_24m@2
FInt_36m@2 FInt_54m@2 FInt_1G@2 FInt_3G@2 FInt_5G@2 FInt_6G@2 FInt_15y@2;
! Father Stage 2;
i2 fs2 | FInt_1m@0 FInt_6m@0 FInt_15m@0 FInt_24m@0
FInt_36m@3 FInt_54m@4.5 FInt_1G@6.5 FInt_3G@6.5 FInt_5G@6.5 FInt_6G@6.5
FInt_15y@6.5;
! Father Stage 3;
i2 fs3 | FInt_1m@0 FInt_6m@0 FInt_15m@0 FInt_24m@0
FInt_36m@0 FInt_54m@0 FInt_1G@0 FInt_3G@8.5 FInt_5G@10.5 FInt_6G@11.5
FInt_15y@15;
! Set intercepts to zero;
[Mint_1m-Mint_15y@0 Fint_1m-Fint_15y@0];
! Estimate means. This is the default setting;
[i1 s1 s3 i2 s2 s4];

! Shared Method Variance Correlations;
Mint_1m Mint_6m Mint_15m PWITH FInt_1m FInt_6m FInt_15m;
Mint_24m Mint_36m Mint_54m PWITH FInt_24m FInt_36m FInt_54m;
Mint_1G Mint_3G Mint_5G Mint_6G Mint_15y PWITH FInt_1G FInt_3G FInt_5G FInt_6G
FInt_15y;

! Adjacent Measurement Correlations;
FInt_1m with FInt_6m;
FInt_6m with FInt_15m;
FInt_15m with FInt_24m;
FInt_24m with FInt_36m;
FInt_36m with FInt_54m;
FInt_54m with FInt_1G;
FInt_1G with FInt_3G;
FInt_3G with FInt_5G;
FInt_5G with FInt_6G;
FInt_6G with FInt_15y;
Mint_1m with Mint_6m;

```
 Mint_6m with Mint_15m;
 Mint_15m with Mint_24m;
 Mint_24m with Mint_36m;
 Mint_36m with Mint_54m;
 Mint_54m with Mint_1G;
 Mint_1G with Mint_3G;
 Mint_3G with Mint_5G;
 Mint_5G with Mint_6G;
 Mint_6G with Mint_15y;

! Family Work Growth Curves;
! For model identification disturbance term error set to a small positive value (.05);
 fwi fws | FWkG1ICC@6.5 FWkG5ICC@10.5;
 [FWkG1ICC@0 FWkG5ICC@0];
 FWkG1ICC@0.05;
 FWkG5ICC@0.05;

! For model identification disturbance term error set according to Byrne (2010);
 ffwi ffws | FFW1G@6.5 FFW5G@10.5;
 [FFW1G@0 FFW5G@0];
 FFW1G@0.7751076; ! Disturbance term variance = (1-Reliability) X Variance;
 FFW5G@0.669766594;

! For model identification disturbance term error set according to Byrne (2010);
 mfwi mfws | MFW1G@6.5 MFW5G@10.5;
 [MFW1G@0 MFW5G@0];
 MFW1G@0.576967776;
 MFW5G@0.808690176;

! Adult Centered Parenting Beliefs Growth Curves;
 TFi TFs | TradF1m@0 TradF1g@6.5 TradF4g@9.5;
 TMi TMs | TradM1m@0 TradM1g@6.5 TradM4g@9.5;
 Ti Ts | TPB01ICC@0 TPBG1ICC@6.5 TPBG4ICC@9.5;
 [TradF1m@0 TradF1g@0 TradF4g@0];
 [TradM1m@0 TradM1g@0 TradM4g@0];
 [TPB01ICC@0 TPBG1ICC@0 TPBG4ICC@0];
 TradF1m TradF1g TradF4g PWITH TradM1m TradM1g TradM4g;

! Authoritative Discipline Strategies Piecewise Growth Curves;
  DFi DF1 | fDisp54m@4.5 fDisp1g@6.5 fDisp3g@6.5;
  DFi DF2 | fDisp54m@0 fDisp1g@0 fDisp3g@8.5;
  DMi DM1 | mDisp54m@4.5 mDisp1g@6.5 mDisp3g@6.5;
  DMi DM2 | mDisp54m@0 mDisp1g@0 mDisp3g@8.5;
  Di Ds1 | PDS54ICC@4.5 PDS1gICC@6.5 PDS3gICC@6.5;
  Di Ds2 | PDS54ICC@0 PDS1gICC@0 PDS3gICC@8.5;
  [fDisp54m@0 fDisp1g@0 fDisp3g@0];
  [mDisp54m@0 mDisp1g@0 mDisp3g@0];
  [PDS54ICC@0 PDS1gICC@0 PDS3gICC@0];
  fDisp54m@1.860165776 fDisp1g@1.762808431 fDisp3g@2.046665258;
```

```
  mDisp54m@1.837756484 mDisp1g@1.568811932 mDisp3g@2.28566712;
  PDS54ICC@0.05 PDS1gICC@0.05 PDS3gICC@0.05;

! Specify class specific model;
%C#1%
! Estimate means separately than the overall model;
[I1 MS1 MS2 MS3 I2 FS1 FS2 FS3 FWI FWS FFWI FFWS MFWI MFWS];
 [TFI TFS TMI TMS TI TS DFI DF1 DF2 DMI DM1 DM2 DI DS1 DS2];

! Set all variances within class to zero;
   I1@0;
   MS1@0;
   MS2@0;
   MS3@0;
   I2@0;
   FS1@0;
   FS2@0;
   FS3@0;
   FWI@0;
   FWS@0;
   FFWI@0;
   FFWS@0;
   MFWI@0;
   MFWS@0;
   TFI@0;
   TFS@0;
   TMI@0;
   TMS@0;
   TI@0;
   TS@0;
   DFI@0;
   DF1@0;
   DF2@0;
   DMI@0;
   DM1@0;
   DM2@0;
   DI@0;
   DS1@0;
   DS2@0;

! Specify class specific model;
%C#2%
! Estimate means separately than the overall model;
[I1 MS1 MS2 MS3 I2 FS1 FS2 FS3 FWI FWS FFWI FFWS MFWI MFWS];
 [TFI TFS TMI TMS TI TS DFI DF1 DF2 DMI DM1 DM2 DI DS1 DS2];

! Set all variances within class to zero;
   I1@0;
   MS1@0;
```

```
   MS2@0;
   MS3@0;
   I2@0;
   FS1@0;
   FS2@0;
   FS3@0;
   FWI@0;
   FWS@0;
   FFWI@0;
   FFWS@0;
   MFWI@0;
   MFWS@0;
   TFI@0;
   TFS@0;
   TMI@0;
   TMS@0;
   TI@0;
   TS@0;
   DFI@0;
   DF1@0;
   DF2@0;
   DMI@0;
   DM1@0;
   DM2@0;
   DI@0;
   DS1@0;
   DS2@0;

! Specify class specific model;
%C#3%
! Estimate means separately than the overall model;
[I1 MS1 MS2 MS3 I2 FS1 FS2 FS3 FWI FWS FFWI FFWS MFWI MFWS];
 [TFI TFS TMI TMS TI TS DFI DF1 DF2 DMI DM1 DM2 DI DS1 DS2];

! Set all variances within class to zero;
   I1@0;
   MS1@0;
   MS2@0;
   MS3@0;
   I2@0;
   FS1@0;
   FS2@0;
   FS3@0;
   FWI@0;
   FWS@0;
   FFWI@0;
   FFWS@0;
   MFWI@0;
   MFWS@0;
```

```
    TFI@0;
    TFS@0;
    TMI@0;
    TMS@0;
    TI@0;
    TS@0;
    DFI@0;
    DF1@0;
    DF2@0;
    DMI@0;
    DM1@0;
    DM2@0;
    DI@0;
    DS1@0;
    DS2@0;

! Specify class specific model;
%C#4%
! Estimate means separately than the overall model;
[I1 MS1 MS2 MS3 I2 FS1 FS2 FS3 FWI FWS FFWI FFWS MFWI MFWS];
 [TFI TFS TMI TMS TI TS DFI DF1 DF2 DMI DM1 DM2 DI DS1 DS2];

! Set all variances within class to zero;
    I1@0;
    MS1@0;
    MS2@0;
    MS3@0;
    I2@0;
    FS1@0;
    FS2@0;
    FS3@0;
    FWI@0;
    FWS@0;
    FFWI@0;
    FFWS@0;
    MFWI@0;
    MFWS@0;
    TFI@0;
    TFS@0;
    TMI@0;
    TMS@0;
    TI@0;
    TS@0;
    DFI@0;
    DF1@0;
    DF2@0;
    DMI@0;
    DM1@0;
    DM2@0;
```

```
   DI@0;
   DS1@0;
   DS2@0;
```

! Request Standardized Estimates [STDYX], Means, Covariances, Correlations [TECH4], and the Lo-Mendel-Rubin Test [TECH11];
OUTPUT: STDYX TECH4 TECH11;

! Request plots of the growth curves;
PLOT:

```
  type is plot3;
  series =
  Mint_1m-Mint_15y (ms1) |
  Mint_1m-Mint_15y (ms2) |
  Mint_1m-Mint_15y (ms3) |
  FInt_1m-FInt_15y (fs1) |
  FInt_1m-FInt_15y (fs2) |
  FInt_1m-FInt_15y (fs3) |
  FWkG1ICC FWkG5ICC (fws) |
  FFW1G FFW5G (ffws) |
  MFW1G MFW5G (mfws) |
  TPB01ICC TPBG1ICC TPBG4ICC (Ts) |
  TradF1m TradF1g TradF4g (TFs) |
  TradM1m TradM1g TradM4g (TMs) |
  PDS54ICC PDS1GICC PDS3GICC (Ds1) |
  PDS54ICC PDS1GICC PDS3GICC (Ds2) |
  fDisp54m fDisp1g fDisp3g (DF1) |
  fDisp54m fDisp1g fDisp3g (DF2) |
  mDisp54m mDisp1g mDisp3g  (DM1) |
  mDisp54m mDisp1g mDisp3g  (DM2) ;
```

! Save out class membership for each couple;
SAVEDATA:

```
 FILE IS 4 Class Membership.txt;
 SAVE = CPROBABILITIES;
```