

# FATHERING ATTITUDES AND FATHER INVOLVEMENT

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## **ABSTRACT**

**JAMIE MICHELLE LEWIS: Fathering Attitudes and Father Involvement**  
(Under the direction of Lisa D. Pearce)

Fatherhood is being increasingly studied, and positive consequences related to involved fathering are gaining greater recognition. However, we still do not understand why observed fathering behavior lags behind society's standard of the highly involved father. Here, I shed light on this topic, integrating research on fathering attitudes, father involvement, and child development through three interrelated substantive chapters. Analyses use nationally representative data on children and their resident fathers from the Early Childhood Longitudinal Study Birth Cohort (ECLS-B).

In Chapter 2, I describe latent classes of fathering attitudes, including variation by race/ethnicity and class. I specifically assess how closely attitudes match the assumption that fathers are essentially of two types: a provider father whose primary responsibility consists of financial provision, and a highly involved father that not only economically supports his children but also engages in daily activities of childrearing. I find that the majority of fathers endorses the highly involved father role, but also that the provider father-involved father typology is inadequate for understanding observed attitudes. Minority and non-professional fathers are more likely than their counterparts to support an adaptive form of fathering that combines aspects of the provider and involved father roles.

The third chapter evaluates the influence of fathering attitudes on latent classes of men's involvement comprised of multiple dimensions of fathering—engagement, accessibility, and responsibility. I also test how structural factors—including employment characteristics, social support, and fathering examples—affect this relationship. Results indicate that American resident fathers' involvement does not measure up to their parenting attitudes. Men's attitudes about fathering are associated with their fathering behavior, but work-family conflict appears to impede men's ability to enact their attitudes.

In the fourth chapter, I test whether fathering profiles encompassing both men's fathering attitudes and behavior are important for understanding preschool-aged children's literacy and mathematics abilities. I further assess whether fathering profiles similar relate to development in girls and boys. I find that men's parenting offers greater benefits for boys than for girls. Profiles characterized by inconsistency between attitudes and behavior tend to relate to unfavorable outcomes in girls but higher literacy for boys.

To my husband, Joel, whose support has sustained me throughout graduate school and in  
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## CHAPTER 1

### INTRODUCTION

Beginning in the 1980s, both social scientists and policymakers have increasingly recognized the importance of fathers in the lives of their children (Cabrera and Tamis-LeMonda 2000; Pleck 2007). During this period, interest in fatherhood intensified, the number and diversity of fatherhood researchers grew, and endeavors to promote the study of fatherhood expanded (Marsiglio et al. 2000). Publications concerned with fatherhood, which attend to a broad range of areas relating to fathering and child outcomes, have increased over time (Goldberg, Tan, and Thorsen 2009). Key topics of fathering research include fatherhood as a cultural representation, the nature of father involvement, elements that shape this involvement, and impacts of fathers on child development (Lamb and Tamis-LeMonda 2004; Marsiglio et al. 2000).

As a result of this research, there is now considerable agreement among social researchers that father-child relationships and interactions can be greatly influential (Lamb 2004). Men's involved participation in childrearing can be beneficial not only for children themselves, but can also promote positive outcomes for fathers and their relationships (Marsiglio et al. 2000; Marsiglio, Day, and Lamb 2000). Advantages for children related to fathering include greater cognitive and socioemotional development, academic success, and reduced levels of externalizing problems and internalizing

problems (Sarkadi et al. 2008). Positive fathering experiences benefit men themselves by fostering personal growth and development. Caring for and interacting with children helps fathers to develop greater sensitivity, intuition, and parental competence (Coltrane 1996), all of which promote satisfaction with the paternal role. With regards to the larger social context, positive father involvement can lead both parents to feel more satisfied in their relationship with one another (Lamb 2002). Greater father involvement may even advance further change in gender relations (Coltrane 1996), reducing persistent inequalities in the division of labor between women and men.

Despite increasing attention to fatherhood and greater recognition of positive consequences related to involved fathering, fathers and fathering continue to be neglected in important ways. In many countries, including the United States, institutional policies fail to adequately support elevated levels of paternal participation in child rearing. Still rare is paid parental leave for fathers, as well as employers that condone men's care for young and sick children (Sarkadi et al. 2008). Further, both in the scholarly literature and in American culture at large, work-family balance is viewed as a "woman's issue (Spain and Bianchi 1996)," effectively ignoring how work-family conflict may impact men.

Perhaps related to this neglect are findings suggesting that although men's provision of care to children has increased (Gerson 1993), mothers remain more involved with children compared to fathers (McBride and Rane 1997; Pleck and Masciadrelli 2004). Social scientists generally focus on this deficit of involved fathering in comparison to maternal involvement or in comparison to recent societal expectations for men to be equitable coparents. In this dissertation, I shift the focus to center on the attitudes and values regarding the father role that fathers hold for themselves. It is

important to investigate whether men's father involvement falls short not only in relation to societal and maternal desires, but also in comparison to fathers' expectations of themselves.

## DISSERTATION PLAN

This dissertation integrates research on fathering attitudes, father involvement, and child development in three substantive chapters, using nationally representative data from the Early Childhood Longitudinal Study Birth Cohort (ECLS-B). I focus on the study of resident fathers because the patterns and predictors of paternal views and involvement differ considerably for resident versus nonresident fathers (Bronte-Tinkew, Carrano, and Guzman 2006). The first substantive chapter, Chapter 2, identifies latent classes of fathering attitudes and examines whether these attitudes vary by race/ethnicity and social class. In Chapter 3, I investigate the impact of fathering attitudes on men's observed parenting behavior. In the final substantive chapter of the dissertation, Chapter 4, I test whether fathering profiles encompassing both men's fathering attitudes and behavior are important for understanding children's cognitive development. I outline the purpose and methodology for each substantive chapter in further detail below.

### *American Fathers' Fathering Attitudes*

In the initial portion of my dissertation, I first describe views of fathering held by fathers themselves. Specifically, I examine latent classes of fathering attitudes and assess how closely they match the assumption that fathers are essentially of two types: a provider father whose primary responsibility as a father consists of financial provision,

and a highly involved father that not only economically supports his children but also engages in daily activities of childrearing. I estimate the proportional representation of fathers in the various classes, in order to assay how thoroughly the progression from provider father to involved father has proceeded. The attributes of the identified father classes are also described. Additionally, I examine whether men's fathering attitudes differ according to race/ethnicity and social class.

I use data from the Early Childhood Longitudinal Study Birth Cohort (ECLS-B), a national probability sample of children born in 2001, to examine men's views regarding fathering. The ECLS-B was administered by the U.S. Department of Education, National Center for Education Statistics (NCES) for the purpose of describing and better understanding children's early development and experiences. A self-administered resident father questionnaire is a key element of the study design. Data come from the first wave, when children were approximately 9 months old.

Latent classes of fathering attitudes were constructed from multiple indicator variables assessing men's attitudes regarding the father role. The first step of analysis involved the generation and description of these latent classes through latent class analysis (LCA). Following this, multiple-group LCA was conducted to assess possible variations in latent classes of fathering attitudes by race/ethnicity and class.

### *Influence of Fathering Attitudes on Father Involvement*

I investigate the influence of men's views regarding fathering on their father involvement in the second piece of the dissertation. In particular, the utility of fathering attitudes for predicting latent classes of paternal involvement encompassing multiple

dimensions of involvement—engagement, accessibility, and responsibility—is evaluated. I further investigate whether observed differences between fathering attitudes and behavior are explained, at least in part, by men's employment demands and levels of social support/fathering examples received from others. That is, I assess whether demanding employment or the lack of social support/fathering examples hinder father involvement, even for men who endorse highly involved fathering.

I once more employ ECLS-B data when investigating the relationship between men's fathering attitudes and father involvement. A longitudinal analysis using data from the first, second, and third waves was conducted. Fathering attitudes were measured at the first wave, when children were about 9 months old, and father involvement was captured at the third wave, when children were of preschool age. Employment factors measured at wave 1 and social support characteristics assessed at wave 2, when children were 2 years old, was used.

Indicators assaying various dimensions of father involvement—including engagement, accessibility, and responsibility—were used to generate latent classes of paternal involvement through LCA. After describing classes of involvement, I employed LCA with covariates to test the impact of fathering attitudes latent classes on father involvement class membership. Finally, men's employment characteristics and social support/fathering examples were separately introduced to the model to evaluate whether the predictive power of fathering attitudes for involvement improves once these factors are considered.



### *Influence of Combination of Attitudes and Involvement on Child Cognition*

In the third and final segment of my dissertation, I research the impact of men's fathering profiles—comprised of both fathering attitudes and observed paternal involvement—upon the cognitive development of their preschool-aged children. I expressly assay whether fathering profiles are important for predicting children's literacy and mathematics abilities. I anticipate finding that children's cognitive abilities are fostered when fathers' endorsement of high involvement is paired with high levels of actual involvement. Moreover, I investigate whether fathering profiles influence children's literacy and mathematics skills in a similar way and to a similar degree, as well as whether fathering profiles similar relate to development in girls and boys.

ECLS-B data were again used to study the influence of fathering profile on children's cognitive development. Information from the first and third waves was utilized to create a longitudinal design. I assessed fathering profile at the first wave, when children were 9 months old, and measured cognitive outcomes at the third wave, when offspring were of preschool age.

Scale scores of children's literacy and mathematics abilities were analyzed separately. These scores came from direct assessments of children conducted by trained and certified interviewers. I produced fathering profile latent classes using indicators of both fathering attitudes and father involvement. I evaluated the impact of fathering profile on children's cognitive abilities via sex-separate ordinary least squares (OLS) regression, since the dependent variables consist of continuous quantitative measures of cognitive development.

## STUDY CONTRIBUTIONS

The expectations and activities of fathers is a key and growing area of interest in sociology of the family. Fathering is relevant for fathers themselves, for their relationships with children's mothers, and for child well-being (Marsiglio et al. 2000; Marsiglio, Day, and Lamb 2000). Fathers have been found to be competent caregivers, able to make sense of children's conduct and appropriately respond to children's needs (Davis and Perkins 1996; Jones 1985). Despite the forward strides that have been made in fathering research, the question of why fathers participate in parenting on a limited basis despite their ability to effectively parent remains unsettled. My dissertation sheds new light on this topic through a focus on men's expectations of themselves as fathers.

The current study contributes to the literature on fathering in a number of ways. First, I assess the specific content of men's fathering attitudes. This offers an improvement over previous studies, which have typically addressed men's general value of the father role or their broad gender ideology. This is important because an attitude specific to a particular behavior is more likely to predict that behavior than are more general attitudes (Ajzen and Fishbein 1977). Second, I assay multiple dimensions of father involvement. Despite the development of a three-dimensional conceptualization of father involvement encompassing engagement, accessibility, and responsibility (Lamb et al. 1987; Pleck, Lamb, and Levine 1985), fathering studies rarely assess all three of these dimensions. The use of latent class analysis also offers a key contribution. This type of analysis enables a more inductive investigation of fathering attitudes, father involvement, and fathering profiles, refining the operationalization of these concepts.

The use of ECLS-B data offers methodological improvements over prior work on fathering. These data include surveys of fathers living in the same household as sampled children, offering a unique opportunity to understand characteristics of resident fathers and their influences on young children (Bronte-Tinkew, Scott, and Horowitz 2009). The father self-administered questionnaires collect information on fathers' involvement with their children, their attitudes about being a father, and about their education and employment (Andreassen, Fletcher, and West 2005; Bethel et al. 2005). This father component is an adequately funded and central feature of the ECLS-B (West 2007). Use of these data allow me to capitalize on information measured directly from fathers, improving upon prior studies' use of proxy reports—typically from the child's mother. The validity of proxy reports has been criticized and found to vary depending on the topic (Cherlin and Griffith 1998). Finally, the ECLS-B data constitute a nationally representative panel study. The majority of prior research on fathering has been cross-sectional, limiting researchers' ability to examine predictors and consequences of positive fathering (Gee et al. 2007). In addition, prior research has often relied on data from small samples of middle-class White fathers (Bronte-Tinkew et al. 2008), inhibiting a generalizable description of American fathers.

The study is also relevant to current social policy. By further illuminating the role of fathers in their children's lives, findings are relevant to a number of policies aiming to foster child development and well-being. The case of the father is heatedly debated with regard to a number of social issues, including concern over “deadbeat dads,” fathers' rights and responsibilities, and whether fathers distinctly contribute to child development (Marsiglio et al. 2000). Fathers themselves are invested in this debate, as evidenced by

the creation of fathers' rights groups. My hope is that by bringing a focus to what fathers themselves desire out of their relationships with children, this study will help shift the debate beyond a discussion of what kinds of fathers men should be to a consideration of how to better enable men to be the kinds of fathers they wish to be.

## CHAPTER 2

### DEFINING DAD: AMERICAN FATHERS' FATHERING ATTITUDES

Research on fathers in recent years has increased in volume and depth. The considerable growth in this body of research has been fueled largely by social scientists' greater recognition of the importance of fathering for child development (Lamb 1981; Pleck 2007). Fatherhood scholars agree that fathers' expanded participation in childrearing is associated with positive consequences for fathers themselves, their marriages, and their children (Marsiglio et al. 2000; Marsiglio, Day, and Lamb 2000).

While the burgeoning literature on father involvement advances our knowledge in numerous ways, an element of fatherhood that merits increased attention is how fathers experience themselves as fathers (Bretherton, Lambert, and Golby 2005). In particular, we need to step back and develop a better understanding of attitudes toward fathering, including those held by fathers themselves.<sup>1</sup> Fathers' roles, like others, are socially constructed, variable, and changing (Coontz 1997; Griswold 1993; Kimmel 1996). Family researchers have generally assumed that the ideology of the male breadwinner-father has largely eroded (Warren 2007), and been replaced by expectations for fathers' more active involvement in daily supervision and care of children. However, little research has been done to document the extent of this attitudinal transition, in particular

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<sup>1</sup>An attitude is defined as "a disposition to respond favorably or unfavorably to an object, person, institution, or event (Ajzen 1988:4)." I use the term "fathering attitudes" to refer to individuals' views regarding appropriate ways for fathers to support and interact with their children.

among fathers themselves. Further investigation of racial/ethnic and class distinctions in fathering attitudes is also required.

In this first part of my dissertation, I use nationally representative data from the 2001-02 Early Childhood Longitudinal Study Birth Cohort (ECLS-B) to assess latent classes of fathering attitudes among resident fathers. These data allow me to study a representative sample of children and their resident fathers, building on research that has primarily focused on fathering in middle-class White families. Information is also attained directly from fathers, offering a considerable advantage over surveys that obtain information on fathers from their wives/partners. I inspect how fathers sort into classes according to their fathering attitudes. In particular, I evaluate whether fathers sort into provider versus involved fathers, or whether there is evidence for additional types of fathers. The relative proportions of fathers who fall in the various classes are also estimated. Survey indicators useful for measuring latent classes of fathering attitudes are identified, and the characteristics of the father classes described. I also assess whether patterns of fathering attitudes differ by race/ethnicity and class.

## BACKGROUND

In this section, I discuss the extant research literature on the topic of fathering attitudes and related factors. First, I consider the provider father role, addressing the historic context of the role and its characteristics. I next outline the involved father role, again with a focus on historic context and key features. In the following section, I discuss possible limitations to the provider father-involved father typology, asserting a need to investigate whether men's views toward fathering are more complex than this dichotomy

suggests. I then review theory and research relevant to the examination of how paternal attitudes may vary according to race/ethnicity and social class membership. Finally, I briefly sketch the research aims and contributions of the current study.

### *Provider Father Role*

*Historic Context.* Fathering attitudes and expectations vary across time and place. Key to understanding a father role is grasping the historic context in which it is embedded (LaRossa 1997; Pleck and Pleck 1997). The provider-father and housewife-mother household, often conceived of as the ‘traditional’ American family, was most prominent from the 1830s through the mid-twentieth century (Bernard 1981).

Patterns of economic production are often thought to relate to family structure and behavior. The male provider role appears to have developed during the shift from subsistence to market economies marked by the industrial revolution (Coltrane 1996). Prior to this period, economic production was predominantly agricultural. Production was closely tied to the family homestead, and family members, male and female, worked side by side to generate items for family use and consumption. As industrial production grew, however, family members worked away from home, selling their labor for cash wages. Because men were substantially more likely to engage in commercial enterprise and wage labor, their gender identity became closely connected to cash provision, economic work, and the work site. In this way, the concept of ‘separate spheres’ developed. The outside public world of business and industry came to be considered the realm of men, while women were responsible for the inner realm comprised of family, childrearing, and care work (Bernard 1981; LaRossa 1997).

As industrialization and manufacturing increased in prominence, and families relied more and more on cash to furnish their needs, men's economic provision became more important. At the same time, the powers and privileges associated with the provider role expanded. However, men also encountered higher demands placed on them as providers (Bernard 1981). As affluence and standards of living augmented, the provider role intensified and transformed into the good-provider role.

*Characteristics.* The primary characteristic of the father-provider as an ideal type is that he earns money to pay bills, financially supporting his wife/partner and children (Coltrane 1996; Hofferth 2003). Under the strictest definition, the male provider fulfills this function exclusively. His wife is not required to participate in the labor force, and can engage in stay-at-home motherhood (Bernard 1981).

In order to excel in his role, the provider father is expected to allocate the vast majority of his effort and time to his paid work. For this reason, his routine absence from the day-to-day activities of childrearing and family life is accepted, even expected (Coltrane 1996). Indeed, in the event of conflict between family and job responsibilities, work takes precedence. When this occurs, however, he is not thought to be shirking his family duties, since it is precisely through his paid work and financial provision that he frames himself as a 'family man.' Thus, provider fathers' identity as men is closely connected to their work and workplace (Bernard 1981).

To the extent that the provider father actively participates in quotidian family life, his involvement is expected to differ substantially from that of the mother (Coltrane 1996). Thus, the parenting of the provider father and homemaker mother is framed as complimentary rather than based on shared parenting goals and activities. Traditionally, a



distinct responsibility of the provider father has been to serve as a role model for his male children. In this way, it was expected that boys, despite spending most of their time under the authority of their mothers and other female teachers, would develop a masculine identity and behaviors appropriate for males.

Finally, sentimental expression and outward signs of affection are not required nor expected from the provider father (Bernard 1981; Hofferth 2003). Often, this facet of the provider role can position men as emotional outsiders to the family (Chodorow 1978; Coltrane 1996). Like his commitment to paid work, lack of emotional involvement does not constitute neglect of fathering, since he fulfills his paternal duties through financial provision.

### *Involved Father Role*

*Historic Context.* Since the mid-twentieth century, male breadwinning has declined considerably in Western societies (Warren 2007), and the ideal of involved fatherhood has grown in prominence. Both cultural and economic factors are thought to be related to this shift in fathering. Important cultural elements include the growth in tolerance of diverse family forms accompanying the second demographic transition (van de Kaa 1987). This easing of normative requirements enabled greater flexibility and independence in family behaviors and roles, including fathering attitudes (Coltrane 1996). A second cultural phenomenon relevant to the advent of the involved father role is the long-term increase in the emotional value of children. Historically, declines in mortality and fertility have created a shift in focus from quantity of offspring to quality, as well as allowed greater emotional investment in children (Kirk 1996). Zelizer (1985)

asserts that the recent emphasis on involved fathering is an extension of this process, and serves as a strategy to enhance child quality.

Economic changes in the latter part of the twentieth century, particularly shifts in the organization of women's and men's work, are also important for understanding the shift in focus from male provision to involved fatherhood. During this time, developed economies transitioned from industrial to postindustrial production. In this context of deindustrialization, men's wages and labor force participation decreased markedly (Oppenheimer 1994; Strangleman 2005). As a result, fewer and fewer families were able to rely on a sole male provider, and women's employment rates sharply rose (Creighton 1999; Crompton 1999; Percheski 2008). As more and more women assumed a share of the responsibility for financial procurement, the authority and privileges associated with the provider father role became diluted. Demands placed on men accordingly expanded, as co-providing wives summoned fathers to participate more in the daily activities of family life and elevate their emotional investment in children (Bernard 1981; Bianchi, Robinson, and Milkie 2006).

*Characteristics.* The ideal type of the involved father differs dramatically from that of the provider father. Compared to those for the provider father, the expectations for the involved father align much more closely with the characteristics and behaviors desired of mothers (Coltrane 1996; Golden 2007; Lister 2003). In particular, the involved father is expected to engage in more equal sharing of household responsibilities and childcare (Doherty, Kouneski, and Erickson 1998; Thompson and Walker 1989). This high level of involvement is desired even at early stages of fatherhood, with new fathers expected to be present at their child's birth and to be active in infant care (Pleck 1987a).

One way that the involved father engages in childrearing is through simply spending time with his children, or ‘being there’ (Barclay and Lupton 1999; Golden 2007). At the most basic level, this encompasses participation in joint activities such as playing games or leisure outings (Hays 1996; Lupton and Barclay 1997). For many involved fathers, ‘being there’ additionally entails caring for children’s physical needs and more practical activities such as bathing, meal preparation and feeding, clothing and laundering, and educational exercises (Coltrane 1996). Finally, ‘being there’ also requires emotional care. A key way in which the involved father cares for his child in this way is serving as an attachment figure for the child, providing comfort and security (Bretherton, Lambert, and Golby 2005).

In addition to committing time to the care of children, the involved father cultivates and maintains a strong feeling of closeness between himself and his child (Golden 2007; Palkovitz 2002). Compared to past expectations of fathers, not only is closeness more tightly bound with the model of the ‘good father,’ but also closeness is defined in different terms. Until recently, the father-child tie developed primarily on the basis of economic cooperation or the father’s position as an authority figure. While emotional intimacy as a form of closeness is not a new concept, it is distinctly and robustly connected to the involved father role. Contemporary parent-child relationships, much like romantic relationships, have come to resemble Giddens’ (1992) ‘pure relationship’ based primarily on emotional intimacy. Another important way that father-child relationships take shape under expectations of high father involvement is that fathers are expected to form strong ties with both their daughters and sons, and to show an equivalent degree of interest in their children regardless of a child’s gender (Pleck

1987a). This is a stark contrast to the provider father, who is thought to be a role model primarily for his son.

A distinct attribute of the highly involved father is his child-centeredness (Coltrane 1996). His first priority is his children, and his sense of self is derived primarily from his role as a father. Other important elements of child-centeredness include high valuation of child well-being and a strong belief that one's actions as a father foster positive growth in children. Due to these views, the involved father treats parenting as a particularly consequential and serious activity. He prioritizes family well-being over financial success, and as a result permits family responsibilities to encroach upon paid work (Schwartz 1994). Other evidence of child-centeredness is men's organization of time and social contacts around their children. Highly involved fathers arrange their non-employed hours in order to maximize time with children, and build social networks with those who are similarly concerned with the responsibilities of parenting (Coltrane 1996).

A final and important way in which the expectations of the involved father differ substantially from those of the provider father is the greater degree of intimacy, emotional expression, and nurturance associated with highly involved fatherhood (Bernard 1981; Pleck 1987b). This standard for positive fathering demands foremost sensitivity to children's needs (Bretherton, Lambert, and Golby 2005; Hays 1996). Though these characteristics have been conventionally associated with women, under expectations of involved and nurturing fathering, experiencing and conveying intense emotion in relation to childrearing are validated as legitimate masculine attributes (Levine 2000).

### *Possible Limitations to Provider Father-Involved Father Typology*

In many current discussions of fatherhood, both in popular culture and academic research, caring is conceptualized as opposite to breadwinning (Crompton 2006; Pfau-Effinger 1998; Pfau-Effinger 2004). Though the typology of the provider father and highly involved father is useful for understanding men's motivations for and perceptions of fathering, there is reason to believe that it may not accurately reflect men's fathering attitudes. Whereas researchers often assume that men generally fit into one of these ideal types and have values corresponding closely with either the provider father or involved father role, real life is complicated and may lead some men to possess other fathering attitudes. Social scientists have previously called for the development and investigation of a more complex typology of views regarding fathering. Golden (2007) suggests that this can be achieved by studying men's experiences with and interpretations of childrearing from the outlook of fathers themselves. Thus, it is necessary to investigate fathering attitudes as a person-based characteristic with the potential to vary among individual fathers, rather than to treat fathering as a sweeping and static social role.

One possibility that arises is that of additional classes of fathering attitudes. This prospect is suggested by findings on another set of family attitudes, gender ideology. As for fathering expectations, it has often been assumed that two categories of gender attitudes are sufficient to characterize people's views regarding appropriate roles for women and men. Typically, individuals are described as either supporting traditional gender roles or endorsing gender equality. However, in his investigation of gender attitudes among a sample of Japanese women, Yamaguchi (2000) found evidence of a third class of these attitudes. Specifically, he found that those supporting gender equality

were composed of two groups—those that are prowork and those that are antiwork. Whereas both of these groups endorsed gender equality, the prowork gender-equality supporters were substantially more likely to value women’s work lives than the antiwork gender-equality supporters.

In addition to there being additional classes of fathering attitudes, it is possible that one or more of these as-yet unrecognized classes combine elements of the provider father and involved father roles. That is, these roles may not be as distinct in practice as is generally assumed. There is likely a degree to which provision fits into the involved father role, or caring into the duties of the provider father. Golden (2007) is critical of the polarized provider father-involved father typology, and calls for movement beyond this either/or orientation to promote a both/and perspective.

Some evidence suggests the presence of a class of fathering attitudes that lies between or somehow combines aspects of the provider father and involved father ideals. Observed trends in gender ideology and the gendered division of labor point to only a partial transition from provision to full involvement among fathers. Whereas men in dual-career families have considerably increased their engagement with children (Coltrane 1996; Darling-Fisher and Tiedje 1990), paternal involvement has not kept pace with the expectations of the involved father role (Backett-Milburn 1982; Bretherton, Lambert, and Golby 2005; LaRossa 1988; Parke 1996). Coltrane (1996) has found the provider father-involved father typology to be inadequate in describing observed fathering patterns, instead classifying men as main providers, ambivalent co-providers, and full co-providers. Also important, Wilcox (Wilcox 2004), in his study of conservative Protestant fathers, found evidence of fathers who combined roles related to provision and

involvement. These ‘soft patriarchs,’ who served as breadwinners and heads of their families, nonetheless were affectionate to, supportive of, and actively involved with their children.

### *Group Differences in Fathering Attitudes*

Though male sole breadwinning has declined in general, the extent of this decline differs by race/ethnicity and class (Warren 2000). Regarding race/ethnicity, some evidence indicates that African American men are slightly less likely than Whites to value highly involved fatherhood (Hofferth 2003). However, there is also reason to believe that African American fathers emphasize aspects of the paternal role other than economic provision. Hofferth (2003) suggests that fathers who encounter difficulties fulfilling expectations of financial provision may offset this by becoming involved with children in other ways. It may follow that the historical barriers to educational and occupational success encountered by African American men (Foster 1995; Ogbu 2007; Wilson 1987) lead them to esteem the highly involved father role.

Cultural differences among various racial/ethnic groups are also likely related to discrepancies in fathering attitudes across these groups. Two elements of Hispanic culture, *machismo* and *familism*, may distinguish fathering in these families compared to other groups. Early research on Mexican-American families suggested that machismo is related to more rigid patriarchy, as well as more emotional detachment in Hispanic fathers compared to Whites (Baca Zinn 1980). Consistent with this, Hofferth (2003) determined that Hispanic fathers, in comparison to White fathers, are somewhat less likely to believe the father role to be important for child development. Others, however,

have pointed out that machismo is also associated with a number of positive and family-centric traits such as respect, courtesy, devotion, and responsibility (Madsen 1973). Some research also suggests that Mexican-American fathers are more actively involved with children than macho stereotypes imply (Mirande 1988). Familism, in which family needs are prioritized over personal needs, may lead Hispanic men to value high father involvement (Baca Zinn 1994; Fuller, Holloway, and Liang 1996).

With regards to class, Messner (1993) asserts that highly involved fatherhood is more common among the more affluent. This is the case, he argues, because fathers feel the need to first ensure that their children are financially provided for and that basic needs such as regular meals, adequate clothing, and comfortable housing are met; only after these needs are met can fathers focus on meeting children's emotional and developmental demands. Because fathers with lower educational attainment or income encounter greater difficulty in meeting children's basic needs, they are more likely to focus on their role as economic providers and to take considerable pride in this role. Fathers with greater economic and human capital, however, have the privilege to concentrate on their emotional involvement and intimate relationships with children. More affluent fathers also have greater freedom to test the newer role of highly engaged fatherhood (Moen and Yu 1999). This is consistent with findings that highly educated men are particularly likely to engage in involved fatherhood (Darling-Fisher and Tiedje 1990).

### *Current Study*

In this initial piece of my dissertation, I describe the distribution of fathering attitudes among resident fathers and factors related to these views, using data from the



2001-02 Early Childhood Longitudinal Study Birth Cohort (ECLS-B). After generating and describing classes of fathering attitudes for resident fathers as a whole, I investigate variations in attitudes by race/ethnicity and class. Data come from the first wave, when children were about 9 months old, as this is the sole wave during which information on fathering attitudes was collected from the full sample of resident fathers.

As ideas about parenting are always changing (Coltrane 1996), a current characterization of fatherhood ideals is needed. In addition, whereas economic and caring behavior has received considerable attention, values regarding provision and care work have been understudied (Hood 1986; Warren 2007). I evaluate and, where needed, suggest improvements to the provider father-involved father typology. A key contribution is the use of latent class analysis, which enables inductive investigation into the measurement of fathering attitudes. In essence, the method allows fathers themselves to share their views regarding appropriate ways of fathering. Further, it permits investigation into whether fathering attitude classes in addition to the provider father and highly involved father are present. Estimates of the proportion of fathers in various classes are attained, enabling a look at fathers' valuation of economic provision versus involved fathering.

The current examination offers other contributions as well. The ECLS-B data are particularly suited to the study's purpose. First, specific measures of fathering attitudes are available, which present a substantial improvement over more widely available measures of general gender attitudes. Second, information on views regarding fathering is obtained directly from resident fathers. Past studies generally rely on reports of fathering from the child's mother. Third, because data are from fathers of a particular birth cohort,

the age of a child, which can impact fathering attitudes, is controlled for. Finally, these data allow study of a nationally representative sample of children and their resident fathers. As previous research on fathering has generally concentrated on middle-class White fathers, a more representative study of fathering attitudes is needed.

## METHODS

### *Data*

Analyses were conducted using data from the Early Childhood Longitudinal Study Birth Cohort (ECLS-B), a nationally representative probability sample of children born in 2001. The study was conducted by the U.S. Department of Education, National Center for Education Statistics (NCES) for the purpose of describing and better understanding children's early development and experiences. Children were selected using a clustered list-frame design; the sampling frame consisted of registered births from the National Center for Health Statistics vital statistics system. Participating children in the ECLS-B came from various racial/ethnic and socioeconomic backgrounds. Oversamples of the following groups were drawn: Asian and Pacific Islander children, American Indian and Alaska native children, Chinese children, twins, and low birth weight children. Data came from the 2001-02 collection period, when the children were approximately 9 months old.

Completed 9-month parent interviews, completed mainly by children's mothers, were obtained for 10,700<sup>2</sup> children, yielding a weighted unit response rate of 74.1% (National Center for Education Statistics 2008b). Following the parent interview, a

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<sup>2</sup>In order to comply with NCES confidentiality legislation, all unweighted sample sizes are rounded to the nearest 50.

resident father questionnaire was distributed to all cases where a father was living in the household with the sampled child. Completed 9-month resident father questionnaires were acquired for 6,300 children, generating a weighted unit response rate of 76.1% (National Center for Education Statistics 2008b). In addition to fathers who finished the resident father questionnaire, there were a handful of resident fathers who completed the parent interview rather than the resident father questionnaire, and who were also included in analysis. In preparation for analysis, cases missing on all indicator variables used to create the dependent latent class variable were dropped, resulting in an overall analytic sample of 6,150 resident fathers. In analyses conducted by class, a small number of fathers missing information on class were excluded, yielding an analytic sample of 6,100 fathers.

### *Measures*

*Dependent Variable.* Latent classes of fathering attitudes were constructed and used as the dependent variable in analysis. Seven indicator variables that measure attitudes about fathering were used to construct the latent classes. Fathers indicate whether they strongly agree, agree, disagree, or strongly disagree with each of the following statements about men's role as fathers:

1. It is essential for the child's well being that fathers spend time playing with their children.
2. It is difficult for men to express affectionate feelings towards babies.
3. A father should be as heavily involved as the mother in the care of the child.
4. The way a father treats his baby has long-term effects on the child.
5. The activities a father does with his children don't matter. What matters more is whether he provides for them.

6. One of the most important things a father can do for his children is to give their mother encouragement and emotional support.
7. All things considered, fatherhood is a highly rewarding experience.

Prior to analysis, dichotomous measures of each indicator were created denoting whether a father agrees or disagrees with the statement.<sup>3</sup>

*Grouping Variables.* Two grouping variables were used in analysis: race/ethnicity and class. An assortment of dummy variables signify the father's race/ethnicity, measured as Hispanic, White non-Hispanic, Black non-Hispanic, Asian non-Hispanic, and other (includes non-Hispanic Native Hawaiian or Pacific Islander, non-Hispanic American Indian or Alaska Native, and non-Hispanic multiple race). Class was captured using a dichotomous variable for occupation type. Fathers were coded as working in a professional/managerial occupation versus a non-professional occupation.

### *Method of Analysis*

I used latent class analysis (LCA) to examine resident fathers' fathering attitudes. LCA uses a set of observed categorical variables<sup>3</sup> to identify an assortment of discrete, mutually exclusive latent classes of individuals (Lanza et al. 2007). The latent classes were determined using the seven dichotomous measures on fathering attitudes as indicators.<sup>4</sup> First, I specified a series of latent class models with two, three, four, and five classes. These models were then assessed and an optimal base model selected using the following instruments: the likelihood-ratio  $G^2$  statistic, Akaike's Information Criterion

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<sup>3</sup>Alternatively, I conducted analysis using all four categories of the indicators. Results using all the original categories are similar to those presented here, and differ primarily in the amount of detail. I present results using the dichotomous indicators here as they are more parsimonious and easier to interpret.

<sup>4</sup>In preliminary analysis, I conducted latent class analysis using a more limited number of indicators. However, these alternate compositions did not improve model fit, and in most cases reduced the fit. For this reason, I present here the latent classes constructed from all seven indicators.

(AIC; Akaike 1974), and the sample size-adjusted Bayesian Information Criterion (ABIC; Sclove 1987).<sup>5</sup> When selecting the optimal base model, I also considered the model's interpretability. This criterion requires that no class be of trivial size, that a meaningful label can be given to each class, and that the classes be distinct from one another in terms of their characteristics (Lanza et al. 2007).

Next, for the optimal base model I estimated two sets of parameters: class membership probabilities ( $\gamma$  (gamma) parameters) and item-response probabilities contingent on class membership ( $\rho$  (rho) parameters). The  $\gamma$  parameters express the distribution of individuals across the latent classes, and the  $\rho$  parameters indicate the correspondence between the observed indicators and the latent classes. Values on the  $\rho$  parameters range from 0 to 1; values closer to 1 signify greater correspondence between a particular indicator response and membership in a given latent class.

Following selection of an optimal base model for the full sample, I conducted multiple-group LCA to explore possible variations in latent classes of fathering attitudes by race/ethnicity and class. Using multiple-group LCA, I tested whether item-response ( $\rho$ ) probabilities differ significantly by race/ethnicity or by class. To test for these differences, I first estimated grouped models in two ways: with item-response probabilities constrained to be equal across group categories, and with item-response probabilities freely estimated (allowed to vary across group categories). The constrained model assumes that the meaning of the latent classes is the same across various groups,

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<sup>5</sup>There is some debate over whether the BIC or ABIC is the superior information criterion in LCA. Some studies support the BIC (e.g., Hagnaars and McCutcheon 2002; Magidson and Vermunt 2004) whereas others support the ABIC (e.g., Tofighi and Enders 2007; Yang 2006). Nyland and her associates (2007) determined that the BIC should be used in continuous LCA and the ABIC used in categorical LCA. Because I conducted categorical LCA, I used the ABIC in model selection. In addition, selection should coincide well with a study's objectives and the conceptual perspective used (Nagin 2005). Models chosen on the ABIC reveal the presence of classes unique to specific racial/ethnic groups, a key research aim.

whereas the freely estimated model allows for the possibility that the classes differ by group. The second step involved a chi-square test comparing the constrained and freely estimated models, with the chi-square statistic calculated as the difference in the likelihood-ratio  $G^2$  statistics for the constrained and freely estimated models. For the analysis of race/ethnicity, as well as that of class, the chi-square statistic was significant, indicating that the meaning of the fathering attitude classes differs by race/ethnicity and by class.<sup>6</sup> For this reason, I conducted LCA modeling separately for each racial/ethnic and class group, following the steps outlined above to select the optimal base model for each group.

## RESULTS

### *Full Sample*

Table 2.1 displays the likelihood-ratio  $G^2$  statistic, AIC, and ABIC for baseline latent class models of the full sample with two, three, four, and five latent classes. By comparing these statistics across the models with various numbers of latent classes, I can determine the optimal base model depicting latent classes of fathering attitudes. Improved model fit is indicated by a noteworthy decrease in the likelihood-ratio  $G^2$  statistic, AIC, and ABIC between a model with  $c$  classes and a model with  $c + 1$  classes. In Table 2.1, a substantial decrease in each of the three criteria is observed when comparing the two-class and three-class model, indicating that the three-class model is an improvement over the two-class model. This is not the case, however, when comparing the three-class and four-class model. Compared to the three-class model, for the four-class model there is

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<sup>6</sup>To conserve space, and because preliminary analyses revealed that group-separate modeling is more appropriate than multiple-group LCA, I do not present results from multiple-group LCA. They are available upon request.

only a minute decrease in the AIC, and a noteworthy increase in the ABIC. These results indicate that the three-class model is the optimal base model and that there are three latent classes of fathering attitudes among the general population of resident fathers.

To gain a sense of what these three classes are, as well as their commonality and characteristics, additional material from the latent class analysis is useful. This information for the three-class base model of the full sample is displayed in Table 2.2. Here, for reasons to be explained shortly, I have labeled the three latent classes of fathering attitudes to reflect fathers who value *involved fathering*, those who endorse *adaptive involved fathering*, and fathers who favor *resistant involved fathering*. Most common are those who favor involved fathering, representing about 78% of new fathers. A substantial minority of fathers (18%) value adaptive involved fathering. Least common, denoting under 4% of new fathers—a small but nontrivial proportion, are those who endorse resistant involved fathering.

Examination of the  $\rho$  parameters allows a detailed look into the characteristics of the various latent classes, and also makes clear why the given class labels are appropriate. The  $\rho$  parameters displayed in Table 2.2 indicate the probability, ranging from 0 to 1, of agreeing with a particular item given class membership. For example, we see that for fathers who favor involved fathering, the probability of agreeing that fathers must play with their children is about 1.00. Let us first look at the involved fathering class. The responses of men in this class match closely with the expectations of the highly involved father role prominent in social discourse since the latter part of the twentieth century. These fathers have a very high probability of agreement ( $\rho > 0.9$ ) on the following items: father must play with child, father should be as involved as mother, father's treatment has

long-term effects, important for father to encourage mother, and fatherhood highly rewarding. In contrast, those who value involved fathering are very unlikely ( $\rho < 0.2$ ) to agree that men have difficulty expressing affection toward babies or that provision is more important than activities with children.

Turning to fathers who endorse adaptive involved fathering, we see that although their response patterns are in some ways similar to those who value involved fathering, distinct differences also exist. Like men who endorse involved fathering, fathers in this class are very likely ( $\rho > 0.9$ ) to agree that a father must play with his child, that a father should be as involved with his child as a mother, that fathering is important for long-term child outcomes, that it is important for a father to encourage his child's mother, and that fatherhood is highly rewarding. However, adaptive involved fathers are substantially more likely than involved fathers to believe that men have difficulty with affection toward babies ( $\rho = 0.42$ ) and that provision takes precedence over activities with children ( $\rho = 0.53$ ). Thus, although there are many aspects of the highly involved father role that adaptive fathers endorse, these fathers appear to be reluctant to eschew some aspects of the provider father ideal. Their adaptation of involved fathering incorporates, to a degree, a hesitance regarding affection and an emphasis on paternal provision.

Finally, we turn to those who value what I have labeled resistant involved fathering. Compared to those who endorse involved fathering, their probability of agreeing that a father must play with his child is similarly high ( $\rho > 0.9$ ), and they are only slightly less likely ( $0.7 < \rho < 0.9$ ) to assert that fathering has long-term effects on children, that fathers should encourage mothers, and that fatherhood is rewarding. Resistant involved fathers' likelihoods of finding affection difficult and prioritizing



provision lie between those of the involved and adaptive fathers. The distinguishing trait of this class of fathers is their resistance to the idea that fathers should be as involved with their children as mothers, a key expectation of the highly involved father role. Those who endorse resistant involved fathering are only about half as likely ( $\rho = 0.46$ ) as those in the other fathering classes to embrace this belief.

#### *By Race/Ethnicity*

Fit statistics for baseline latent class models derived separately by race/ethnicity are found in Table 2.3. For White non-Hispanics, when proceeding from the two-class to the three-class model, whereas the likelihood-ratio  $G^2$  statistic declines by a substantial amount, the decrease in the AIC is small and the value of the ABIC increases. For fathers of some other race, both the AIC and ABIC grow larger when comparing the two- and three-class models. Thus, for these two groups, the two-class model is optimal. When advancing from the two- to the three-class model for Black non-Hispanics, the likelihood-ratio  $G^2$  statistic and AIC decrease notably, and a small reduction in the ABIC is observed. However, the third class in the three-class model represents only about 1.5% of Black fathers, or about 8 fathers in the sample. Because the trivial size of this class suggests that the three-class model is of problematic interpretability, the two-class model is ideal.<sup>7</sup>

Comparison of fit statistics across models of varying numbers of latent classes for Hispanics and Asian non-Hispanics reveals that a three-class model is optimal for these groups. In Table 2.3, for both groups a noteworthy decrease in each of the fit criteria

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<sup>7</sup>To conserve space, I do not show the item-response probabilities associated with the three-class model for Black non-Hispanics. They are available upon request.

occurs when proceeding from the two- to the three-class model, providing evidence that the three-class model is preferable over the two-class model. However, for both groups the four-class model is not an improvement upon the three-class model. When comparing the three- and four-class models for Hispanics, both the AIC and ABIC increase. For Asian non-Hispanics, a slight decrease in the AIC and an increase in the ABIC are observed.

The selected models for the various racial/ethnic groups are displayed in Table 2.4. To interpret these models, I focus on one class of fathering attitudes at a time, considering similarities and differences in the focal class by race/ethnicity. Looking first at the involved fathering class, I observe that this class is represented in all racial/ethnic groups, and is the largest class for each racial/ethnic group. In addition, the  $\rho$  parameters associated with this class take on similar values for each racial/ethnic group, indicating that an involved father's views regarding play with children, the expression of affection, etc. are alike regardless of whether he identifies as White, Black, Hispanic, Asian, or of some other race. In other words, the characteristics of those endorsing involved fathering are similar across the various racial/ethnic groups. Despite these similarities, however, the proportion of fathers favoring involved fathering varies by race/ethnicity. This group is largest among Whites (93%), somewhat smaller among Blacks (86%), smaller still among Hispanics (68%) and those of another race (65%), and smallest among Asians (53%).

When focusing on the resistant involved fathering group, one observes that this class is found only among White non-Hispanic fathers. In contrast, the adaptive involved fathering class is represented among each racial/ethnic minority group. Although this

class is the second-largest for each minority group, the proportion of adaptive involved fathers differs somewhat by racial/ethnic minority group. This class of fathering attitudes is most common among Asians (39%) and fathers of another race (35%), less common among Hispanics (28%), and least common among Blacks (14%). In addition, the characteristics of adaptive fathering vary in some ways by race/ethnicity. Compared to other minority fathers, those of some other race are about 9-17% less likely to agree that fathers should be as involved as mothers. Black non-Hispanics are about 8-10% less likely than other minority fathers to endorse the statement that fathering has long-term effects on children. Thus, there are some slight fluctuations among adaptive fathers in terms of their adherence to central tenets of the involved fathering role. Variation is greater, however, regarding adaptive fathers' incorporation of aspects of the provider father ideal. Adaptive fathers of another race do so the least, as they are least likely to agree that men have difficulty expressing affection ( $\rho = 0.39$ ) or that provision takes priority over activities with children ( $\rho = 0.32$ ). Black adaptive fathers express the greatest hesitance regarding affection ( $\rho = 0.63$ ), followed by their Asian ( $\rho = 0.53$ ) and Hispanic ( $\rho = 0.51$ ) counterparts. Emphasis on paternal provision is greater for Black ( $\rho = 0.65$ ) and particularly Hispanic ( $\rho = 0.72$ ) adaptive fathers compared to their Asian counterparts ( $\rho = 0.38$ ).

An important result apparent when investigating fathering attitudes by race/ethnicity is the presence of two small but nontrivial classes that are missed when describing the full sample of fathers. Similar to resistant involved fathering, these classes are unique to a single racial/ethnic group. The first, *affectionate providing*, is found only among Hispanic fathers. In many ways, the views of members of this class coincide well

with the expectations of the provider father role. Their high probability of agreeing that fathers must play with children ( $\rho = 0.95$ ) is consistent with a focus on fathers as playmates rather than caretakers. Similarly, affectionate providers' emphasis on encouraging mothers ( $\rho = 0.84$ ) can be interpreted as an underscoring of indirect rather than direct forms of fathering. In addition, these fathers are more than 25% less likely than involved fathers to find fatherhood highly rewarding, suggesting for these men a looser connection between one's sense of self and role as a father. Affectionate providers, compared to involved fathers, are also about 30% less likely to believe that fathers should be as involved with children as mothers or that fathering has long-term consequences for children. Members of this group also have a substantial likelihood ( $\rho = 0.64$ ) of prioritizing economic provision over activities with children. Yet there is one way in which the affectionate providers do not resemble the classic provider role; this characteristic makes clear the label assigned to this class of fathering attitudes. These fathers are unlikely to agree ( $\rho = 0.11$ ) that fathers have difficulty expressing affection toward young children.

The final unique class, *uninvolved fathering*, is found only among Asian fathers. Fathers in this class resemble involved fathers in terms of their valuation of play and fatherhood in general. Compared to involved fathers, uninvolved fathers are only somewhat less likely to avow that fathering has long-term effects on children or that fathers should encourage mothers. Although Asian uninvolved fathers are more likely than involved fathers to express hesitance regarding affection or prioritize provision, their probabilities of agreeing with these items fall short of those of the Asian adapters. The distinguishing characteristic of those favoring uninvolved fathering is their view towards

the relative involvement of fathers versus mothers in childrearing. These fathers are very unlikely ( $p = 0.08$ ) to endorse equal involvement of fathers and mothers with children, setting them apart from involved fathers, adaptive fathers, resistant fathers, and even the affectionate providers.

*By Class*

Table 2.5 contains the likelihood-ratio  $G^2$  statistic, AIC, and ABIC for baseline latent class models by class. For non-professionals, the three-class model is a better fit than the two-class model, as indicated by a substantial decline in each of the fit criteria. When proceeding to the four-class model, however, the decrease in the AIC is small and the value of the ABIC increases. These results suggest that the three-class model is optimal among non-professionals. Professionals, however, are best described using a two-class model. Comparison of the two- and three-class models for this group reveals an upturn in the ABIC.

Item-response probabilities for selected models for non-professionals and those engaged in professional/managerial work are presented in Table 2.6. Among non-professionals, the three classes of fathering attitudes match those found in the full sample of resident fathers: involved fathering, adaptive involved fathering, and resistant involved fathering. However, only two of these classes—involved and resistant involved fathering—are represented among professional fathers. That adaptive involved fathering is found only among non-professionals suggests that residual beliefs associated with the provider father role—including a de-emphasis of fathers' emotional closeness with

children and placing priority on economic provision—are more prominent among men who work in less prestigious occupations.

Further comparison of fathering attitudes by occupational category reveals a mixture of similarities and differences. The involved fathering class, which is found among both professionals and non-professionals, is for both groups the largest class, and has similar characteristics across both groups. However, a smaller proportion (74%) of non-professionals, compared to professionals (95%), endorses involved fathering. Instead, a substantial portion (23%) of non-professionals belongs in the adaptive new fathering class, a group that, as noted before, is not observed among professionals.

Turning to resistant involved fathering, we see that this class is the smallest class for both occupational groups, and that the size of this group is only slightly larger for professionals/managers compared to non-professionals. Yet the characteristics of resistant involved fathers differ somewhat according to professional status, such that non-professional members of this class distance themselves a little more from norms of involved fathering. Compared to professional resistant involved fathers ( $\rho = 0.17$ ), non-professionals in this class are slightly more likely ( $\rho = 0.28$ ) to emphasize provision over active involvement with children. Non-professional resistant involved fathers are about 13% less likely than their professional/managerial counterparts to find fatherhood highly rewarding. The most substantial difference involves that belief that fathers ought to encourage mothers, such that non-professional resistant involved fathers are only about two-thirds as likely as professionals to agree with this item.

## DISCUSSION AND CONCLUSION

Social scientists have begun to build a body of literature suggesting that paternal involvement is related to desirable consequences for children, parental relationships, and fathers themselves (Marsiglio et al. 2000; Marsiglio, Day, and Lamb 2000). Although research on fathering has grown in recent years, little attention has been paid to men's expectations of themselves as fathers. Because fathering practices are shaped by men's fathering attitudes (Nangle et al. 2003; Parke 2004), more information on this topic is needed. Here, I assess these attitudes using nationally representative data from resident fathers, documenting whether men's beliefs regarding fathering reflect the shift in the larger culture from an emphasis on the provider role to greater valuation of the highly involved father role. In addition, I reveal important variations in fathering ideology by race/ethnicity and class.

My results demonstrate that American resident fathers do highly value their roles as fathers, consistent with previous research (Lamb and Sagi 1983; Pleck 1983). Although their fathering attitudes differ in various ways, men of various ideological classes tend to agree that fatherhood is highly rewarding. This finding suggests that researchers should explore men's fathering not only in terms of its consequences for children and romantic relationships, but also in terms of its relevance for men's identities.

I also find evidence that fathers have largely embraced and internalized the expectations of the highly involved father role. Whether looking at resident fathers as a whole or considering variation in fathering attitudes by race/ethnicity or social class, the larger proportion of men endorse this form of fathering. These fathers value 'being there' for children, including engaging in playful pastimes with children, expressing affection

for children, and participating in activities with children as well as providing for them. Members of the involved father class also demonstrate child-centeredness, believing fathering to be highly salient for child outcomes and finding fatherhood to be highly rewarding. Of central importance, involved fathers stress not only indirect support of children via encouragement of a child's mother, but also emphasize more equal sharing of parenting responsibilities between fathers and mothers.

Although my results demonstrate that a majority of resident fathers approves of highly involved fathering, others possess values that fall short of the involved father ideal. This is true of the adaptive involved fathers, resistant involved fathers, affectionate providers, and uninvolved fathers. This finding suggests that for a substantial minority of men, provision continues to predominate other aspects of fathering.

I also find, as have others (Coltrane 1996; Wilcox 2004), that the commonly-used provider father-involved father typology inadequately describes observed fathering patterns. First, no class of fathering attitudes aligns closely with the characteristics of the father-provider ideal type. The class that most resembles this ideal, the affectionate providers, do prioritize provision over engaging with children in activities, but reject the emotional distance associated with the good-provider role. Further, this class is small and found only among Hispanic fathers. Second, I find evidence of additional classes of fathering attitudes that combine elements of the provider father and involved father roles. Despite their support for various aspects of involved fathering, adaptive involved fathers remain unenthusiastic regarding the emotional demands of engaged fathering, and continue to place some emphasis on financial provision. Resistant involved fathers and,



to a greater degree, uninvolved fathers are reluctant to accept an equal share of parenting responsibilities.

Whereas the involved fathering class is the largest class for each racial/ethnic and occupational group, discrepancies by race/ethnicity and class are also apparent. Of note is that the adaptive involved fathering class is represented among minority fathers but not among Whites. This finding may reflect disadvantages experienced by minority groups relative to Whites, including economic disadvantages. This is consistent with Messner's (1993) argument that fathers who face greater hindrances to meeting children's basic needs place greater value on their role as a financial provider.

The importance of cultural factors particular to certain racial/ethnic groups is highlighted by the unique class of fathering attitudes, the affectionate provider class, found only among Hispanic fathers. It appears that Latino men's values are influenced both by machismo and familism. As suggested by earlier work on Mexican-Americans (Baca Zinn 1980), the custom of machismo is likely related to endorsement of a more rigid gendered division of labor, with men prioritizing financial provision over activities with children. Yet affectionate providers express considerable comfort with emotional closeness to children, suggesting the influence of familism. With regards to class, I find that a greater proportion of professional/managerial fathers, compared to non-professionals, endorse involved fathering. This result is consistent with prior research indicating that social class is positively related to involved fatherhood (Darling-Fisher and Tiedje 1990).

Although this research offers new information on the fathering attitudes of resident fathers, it is not without some limitations. My descriptive analyses of

racial/ethnic and class differences do not include controls for other factors that may be related to fathering attitudes. For this reason, I cannot definitively conclude that group variation in fathering ideology is due to race/ethnicity or to social class. In addition, my use of occupational status—working in a professional/managerial versus non-professional vocation—as an indicator of social class involves the choice of one out of multiple potential measures. It may be that findings differ somewhat when operationalizing social class in another way, say as educational attainment or income.

A final concern is the possibility that the sample used is selective rather than representative. Because the ECLS-B sampled children rather than resident fathers, findings from these data may not generalize to all resident fathers. Specifically, these data may underrepresent stepfathers and other nonbiological fathers, who often do not appear in children's lives until children are older. In consequence, the sample is likely selective of men who value more involved forms of fathering, as paternal involvement is typically lower for nonbiological compared to biological fathers (Harris and Ryan 2004). If this is the case, the findings reported here may somewhat overestimate the size of the involved fathering class.

Whereas I provide a much-needed description of resident fathers' fathering attitudes, other tasks remain for future research. One topic of importance is how factors other than race/ethnicity and social class relate to fathering attitudes. Potential factors to consider include other personal characteristics, traits of fathers' wives and partners, and levels of social support for involved fathering received from others. A description of fathering attitudes among non-resident fathers is required as well. Also of interest would be an empirical test of the relationship between men's fathering attitudes and their

paternal involvement. Finally, the relevance of men's fathering attitudes for outcomes for children, fathers, and relationships between parents merits investigation.

In summary, I find that American resident fathers largely embrace the highly involved father role. Thus, there is potential for the reaping of rewards associated with this form of fathering, such as richer lives for men and benefits for children (Marsiglio et al. 2000; Marsiglio, Day, and Lamb 2000). Involved fathering may also facilitate expansion in choices available to women, with a potential to increase gender equality in the future (Coltrane 1996). However, men and families may also be exposed to costs associated with this type of fathering. There is a potential for these fathers to experience work-family conflict and to make sacrifices in the workplace, which can be problematic for men as well as their families (Schwartz 1994). This research is also relevant to policy makers and promoters of shared parenting. It suggests that findings that fathering behavior lags behind the expectations of the involved father role (Bretherton, Lambert, and Golby 2005; Parke 1996) cannot be accounted for by a great hesitance on the part of men to adopt these expectations. Other potential explanations for fathers' lower parental engagement relative to mothers must be developed and tested.

## **CHAPTER 3**

### **INFLUENCE OF FATHERS' FATHERING ATTITUDES ON FATHER INVOLVEMENT: ROLE OF EMPLOYMENT CHARACTERISTICS AND SOCIAL SUPPORT**

Fatherhood is a subject receiving increased attention. As women's involvement in paid work has become more common and created conflict between women's roles as mothers and employees, awareness of the contributions that fathers make to family life has grown (Golden 2007). Interest in fatherhood research has also been fueled by findings indicating that involved fathering is related to positive child outcomes (Pleck and Masciadrelli 2004), marital satisfaction (Lamb 2002), and men's personal growth and development (Coltrane 1996).

Evidence from the growing body of fathering research indicates that men's engagement in childcare has expanded substantially (e.g., Coltrane 1996), and that men value fatherhood more than paid work (Lamb and Sagi 1983; Pleck 1983). While substantial, however, growth in men's active involvement in childrearing has been limited in comparison to both scholars' expectations and changes in women's behavior (Pleck and Masciadrelli 2004). The onset of childbearing continues to be accompanied by a shift toward a more conventional division of labor, whereby men engage more in paid work and women assume more responsibility for childrearing and housework, even among relatively egalitarian couples (Cowan 1988; South and Spitze 1994). Fathers' involvement in childcare is only slightly higher among dual-earner couples compared to

single-earner couples, indicating that mothers are primarily responsible for childrearing even when they share in the task of financial provision (Pleck and Masciadrelli 2004).

While these assessments of father involvement are informative, an understanding of how fathering behavior is influenced by men's expectations of themselves as fathers is needed. Further, factors that weaken the relationship between men's fathering attitudes and their actual father involvement merit explanation. Some studies suggest that observed fathering behavior is insufficient when compared to society's standard of the highly involved father (Dienhart 2001; McMahon 1995). This may occur if many fathers do not share this standard for themselves, but instead have expectations that better parallel the provider-father ideal and lead them to focus on fathering via economic contributions. A second possibility is that many fathers do desire to be highly involved fathers but encounter difficulties, such as high work demands or lack of social support or positive fathering examples, in enacting these attitudes.

In this second piece of my dissertation, I investigate the relationship between American fathers' fathering attitudes and father involvement using nationally representative panel data from the Early Childhood Longitudinal Study Birth Cohort (ECLS-B). Fathering attitudes' usefulness for predicting latent classes of father involvement encompassing different aspects of involvement—engagement, accessibility, and responsibility—is assessed. In addition, I research whether the influence of fathering attitudes on men's paternal involvement strengthens once employment characteristics or social support and fathering examples are accounted for. That is, I test whether demanding employment or the lack of social support/fathering examples impedes father involvement, even for men who endorse highly involved fathering. This information

provides social scientists insight into how greater paternal involvement can be advanced, as well as a better understanding of obstacles that hinder this goal.

## BACKGROUND

Here, I address theory and research findings relevant to examining the relationship between fathering attitudes and father involvement. I begin by describing how I conceptualize father involvement. Then, I discuss the propositions of role identity theory and its relevance to the current topic of research. I also review results from prior studies on the association of fathering attitudes with paternal behavior. In the next section, I consider factors that may inhibit men from enacting their fathering attitudes, and thus attenuate the strength of the relationship between fathering attitudes and father involvement. In particular, I focus on employment characteristics and social support and fathering examples as potential barriers to congruence between fathering attitudes and behavior. Lastly, I summarize the current study's research purposes and contributions to prior research.

### *Types of Father Involvement*

Father involvement can be defined in various ways. An especially common measure used from survey data has been the number of hours a father spends with children or engages in direct childcare. However, this conceptualization fails to capture different aspects of fathering. A more nuanced construct of paternal involvement that has been developed and applied in research considers three elements of fathering: engagement, accessibility, and responsibility (Lamb et al. 1987; Pleck, Lamb, and Levine

1985). Within this framework, engagement refers to a father's experience of direct contact, caregiving, and shared activities with his child. Accessibility entails a man's presence and availability to his child regardless of actual interactions between father and child. Finally, responsibility encompasses a father's participation in decision making regarding his child. Fathers demonstrate responsibility through tasks such as selecting health professionals and arranging medical appointments, arranging child care, speaking with teachers and caregivers, and monitoring a child's activities (Marsiglio, Day, and Lamb 2000; Pleck 2007).

While this three-dimensional conceptualization has been widely used in fathering research (e.g., Berger et al. 2008; Gee et al. 2007; McBride and Rane 1998), some social scientists have proposed that this theoretical model be further refined. In particular, Palkovitz (1997) suggests that, within the dimension of paternal engagement, distinctions be made among the types of activities in which fathers and children interact. He further asserts that a key division is that between play and care activities. The need for this distinction in order to gain a more nuanced understanding of paternal engagement is corroborated by evidence that fathers participate proportionately more in play compared to care routines (Bronte-Tinkew, Carrano, and Guzman 2006; Collins and Coltrane 1995; Hewlett 1992; Lamb 2004). Accordingly, the more repetitive and less pleasant tasks of caring for children are more frequently performed by women (Coltrane 1996). Further, Bretherton et al. (2005) found that both mothers and fathers express the idea that play, especially outdoor and rough-and-tumble play, is a special characteristic of the father-child relationship.

### *Relationship between Fathering Attitudes and Father Involvement*

A substantial body of social science literature suggests that, in general, individuals' behavior is positively associated with their values and attitudes (e.g., Levant 1996; Pleck, Sonenstein, and Ku 1994). Goffman's (1961) role identity theory is useful for understanding a similar connection between role expectations and role performance. According to this perspective, those who express strong attachment to a given role, as evidenced by strong desires and expectations to identify with the role, are likely to enact the role. That is, behavior is a function of one's commitment to an identity (Burke and Reitzes 1991). In addition to societal expectations related to a given position, one's personal meanings attributed to a role influence one's individual behavior (Cast 2003).

Fathering is one area illuminated by role identity theory. Consistent with the expectations of role identity theory, men's involvement in childcare is shaped by paternal beliefs about the father's role (Bonney, Kelley, and Levant 1999; Nangle et al. 2003; Parke 2002a; Parke 2004), as well as the degree of salience assigned to the role (Bruce and Fox 1999; Minton and Pasley 1996). Both level and type of paternal involvement are related to men's perception of the father role (Fox and Bruce 2001; Pleck and Stueve 2004). In general, men who express more positive attitudes regarding the paternal role invest more in their children's lives (Hofferth 2003; McBride and Rane 1997; Stone and McKenry 1998). However, findings regarding the strength of this association are inconsistent. Whereas McBride et al. (2004) determined men's perceptions of the father role to be the strongest predictors of all forms of paternal involvement, other research suggests that the impact of fathering attitudes on paternal involvement is moderate rather than large (Bronte-Tinkew, Carrano, and Guzman 2006; McBride and Rane 1997). Father



involvement may even occur in the absence of strong commitment to the paternal role. In his in-depth study of resident fathers, Coltrane (1996) noted that a number of fathers participate in child care out of recognition of the financial necessity that their wives work rather than out of choice.

One shortcoming shared by much of the previous work on this topic is a focus on fathers' general perceptions of their role such as commitment to, identification with, or salience of the role. To further develop identity theory, it is important to go beyond these general aspects to explore the impact of specific fathering attitudes, such as those related to financial provision and nurturing, on paternal involvement (Marsiglio 1995a). Previous research findings further highlight the need to distinguish between men's identification as fathers in general and their expectations for themselves in specific fathering domains. Rane and McBride (2000) failed to find any differences in father involvement between men who rated the parent status as more central and those who prioritized the worker status. However, father's engagement with and responsibility for children were greater for fathers who emphasized the specific domain of nurturance. Further, there was no correlation between rating parental status as central and rating nurturance as central. In their study of two-parent families with preschool-aged children, Maurer et al. (2001) determined father identity to predict breadwinning but not caregiving behavior.

In this piece of my dissertation, I investigate how fathers' specific attitudes relate to their paternal behavior, focusing on views related to economic provision and involvement in daily childrearing activities. The limited research assessing these specific domains of the father role suggests that men with involved father attitudes, in general, are more involved in their children's lives compared to fathers who emphasize provision.

Costigan and Cox (2001) found that fathers interact more with children when they believe that paternal influences are important for positive child development. Similarly, fathers who perceive their role as greater than that of a breadwinner demonstrate greater engagement with and responsibility for children (McBride et al. 2004). Based on this research, I hypothesize that engagement in play and care activities, as well as accessibility to and responsibility for children, is greater for fathers who value highly involved fathering than for those who maintain more of a focus on provision.

#### *Other Factors Related to Father Involvement*

Whereas previous literature suggests that men's fathering attitudes are important for understanding their actual father involvement, associations between men's perceptions of the paternal role and their consequent fathering behaviors have been found to be, on average, moderate rather than large in magnitude (Bronte-Tinkew, Carrano, and Guzman 2006; McBride and Rane 1997). There are two possible explanations for this observation. First, it may be that the impact of fathering attitudes on paternal involvement is, in fact, modest. Second, it is possible that perceptions of fathering are more influential but that barriers inhibit men, to a degree, from enacting their fathering attitudes. This likely occurs because identity is most instrumental for behavior under the condition of "freedom of choice (Stryker 1987)." Dollahite (1998) suggests that the majority of men aim to be good fathers, but encounter substantial challenges in the form of economic, familial, and societal requirements and intricacies. Thus, it is critical to consider these barriers in order to improve our understanding of the relationship between paternal attitudes and involvement (Doherty, Kouneski, and Erickson 1998).

*Employment Characteristics.* The structure of the workplace and high employment demands men face present one key obstacle to involved fathering (Dienhart and Daly 1997; Doherty, Kouneski, and Erickson 1998; Gerson 1997; Pleck 1993; Pleck and Masciadrelli 2004). One way in which occupational obligations constrain fathering is through the limitations they place on the time men are available to their children (Dollahite 1998). An additional mechanism through which workplace conditions affect men's participation in childrearing is the emotional repercussions of work for employees. Even when working fathers are physically available to their children, their emotional presence may be impeded by occupational stress (Menaghan 1991).

Particular employment characteristics relevant to paternal involvement include employment status, work hours, job benefits, and job shift. Employment status has been theorized to be important for father participation, but the precise nature of this relationship is unclear. Hofferth (2003) asserts that fathers who are out of work will be more involved in childrearing activities as a way of compensating for their lack in economic provision for children. Consistent with this perspective, some studies indicate that unemployed fathers spend more time with children (Easterbrooks and Goldberg 1985; Pleck and Masciadrelli 2004). Bronte-Tinkew et al. (2006) found such fathers to be more involved than fathers working full-time in multiple ways, including in physical care, cognitively stimulating activities, and nurturing. In contrast, there is reason to believe that men's lack of employment can reduce their involvement with children. Unemployment impairs, for many men, feelings of self-worth, leading to increased levels of hostility and irritation at the prospect of higher interaction with children (McLoyd 1989; McLoyd 1990; Menaghan 1991). Accordingly, Hofferth (2003) determined that

father engagement and responsibility are lower in families with a female breadwinner and unemployed male. Finally, some research has found no relationship between employment status and paternal involvement (e.g., Carlson and McLanahan 2006).

Theory and research regarding men's work hours are more consistent. According to the time availability approach, couples allot household tasks, including child care, based on the members' free time, with greater responsibility assigned to the member with more availability (Becker 1981; Geerken and Gove 1983). An important determinant of one's time availability is the number of hours one works (Rane and McBride 2000). In support of the time availability approach, fathers' work hours are commonly found to be negatively associated with men's overall involvement with children (NICHD Early Care Research Network 2000), as well as with men's engagement with (Ammons and Edgell 2007; Bass et al. 2009) and responsibility for (Hofferth 2003) youngsters.

Job benefits such as flexibility and paternal leave typically promote father involvement (Dollahite 1998). When employees have the flexibility to schedule their work in a way suitable to their own, their partners', and their children's needs, work-family conflict is decreased (Gareis and Barnett 2002). Further, greater flexibility eases working parents' transition from work to engagement with children (Ashforth, Kreiner, and Fugate 2000). However, these promising findings are qualified by evidence that available family-friendly work policies are underutilized by men and aid fathers with diverse degrees of success (Hochschild 1997).

A final employment characteristic likely related to father involvement is job shift, or when men's work hours occur. Previous evidence suggests that working a nonstandard (i.e., non-day) shift may either promote the sharing of family responsibilities or interfere

with fathering (Davis, Crouter, and McHale 2006). A non-day work schedule can facilitate the sharing of child care (Coltrane 1996), particularly when parents work different shifts (Presser 1989; Presser 1994). Alternatively, working a nonstandard shift can create a structural mismatch in work and family time that impedes father involvement (Zaslow, Jekielek, and Gallagher 2005). In cases where fathers are working at the same time their children are available to spend time with them, fathers miss opportunities for interacting with their children. In support of this expectation, some research finds that shift workers are less involved with children compared to those working standard, daytime shifts (Mott 1965; Nock and Kingston 1988; Presser 2003).

*Social Support and Fathering Examples.* Other important barriers to higher levels of paternal engagement, accessibility, and responsibility are the lack of social support and positive examples of fathering. As social actors feel the need to justify their actions to others (Coltrane 1996), the amount of support provided by important others for an identity, such as that of the father, is a key antecedent of the prominence of the identity (McCall and Simmons 1978). A body of research supports the premise that social support enhances both the quantity and quality of father involvement (e.g., Dienhart and Daly 1997; Doherty, Kouneski, and Erickson 1998; Gerson 1997). Criticism of men's competency as fathers or devaluation of their contributions as childrearingers inhibits paternal participation (Golden 2007). Within the current context of increased expectations of fathers, one might presume that fathers receive adequate encouragement for fathering from their social environment (Dollahite 1998). Nonetheless, many social factors continue to discourage fathers' interaction with children (Dienhart and Daly 1997; Doherty, Kouneski, and Erickson 1998; Moore and Kotelchuck 2004; Popenoe 1996).

Influential others from whom fathers seek social support include men's spouses or partners, kin, friends, and employers or coworkers. First, children's mothers serve a key role in either incorporating their partners in the undertaking of parenting or restricting fathers' involvement to a more minimal role (Bronte-Tinkew, Scott, and Horowitz 2009). Prior evidence suggests that mothers' perspectives toward, expectations of, and support for paternal participation are related to men's observed participation (De Luccie 1995; Furstenberg 1995; Ihinger-Tallman, Pasley, and Buehler 1995). Burke and Reitzes (1991) assert that when fathers' spouses or partners indicate their desire for higher levels of interaction between a father and his children, fathers may alter their behavior accordingly, leading to greater father involvement. In contrast, paternal involvement is inhibited by maternal gatekeeping behaviors such as appointing standards, setting schedules, and hindering father-child interaction (Ehrensaft 1990; McBride and Rane 1998). Such behaviors reduce active fathering by fostering fathers' sense of ineptitude or apprehension of maternal criticism (Dienhart 2001; LaRossa 1988). Maternal gatekeeping continues to be a concern because many women feel ambivalent about increased levels of father involvement, simultaneously desiring greater cooperation from their male partners and maintenance of women's dominance of sensitive parenting (Allen and Hawkins 1999; Coltrane 1996; Hochschild 1989).

Lack of social support from kin and friends can also limit father involvement, even for men who support expectations of highly involved fathering. Coltrane's (1996) in-depth study of two-parent families revealed that older generations continue to be chiefly concerned with their son's and son-in-law's financial provision duties. Men often receive comments and subtle cues from parents to prioritize economic provision,

particularly when their parenting practices differ substantially from those their parents had used. Notably, friends appear to be more supportive of men's participation in childrearing now compared to the past (Coltrane 1996; Lein 1979).

In general, evidence indicates that men encounter low levels of support from those in their work environment with regard to fathering. First, general awareness of men's needs as fathers is low. The great majority of employers take for granted that 'work-family' policies were created solely for working mothers (Pleck 1993).

Accordingly, married men, unlike women, are rarely asked how they handle both work and family demands (Menaghan 1991). When fathers do discuss topics related to family life or parenting at work, their coworkers frequently tease them or otherwise discourage them from talking about such matters (Coltrane 1996). These circumstances effectively remove for men one potential source of information—their coworkers—on the management of work and family responsibilities. Men's concern that they face social sanctions upon making sacrifices at work in order to engage more with their families provides further evidence of low social support in the workplace. Dedication to parenting is often thought by employers and coworkers to indicate insufficient commitment to the job. In the rare cases that men do take advantage of part-time employment of parental leave, they face sanctions such as being labeled as unreliable or being passed over for promotion (Coltrane 1996).

The fathering examples to which men are exposed are also important for understanding their later participation as fathers, as men's fathering behaviors are associated with their experiences with their own fathers (Cowan and Cowan 1987; Hofferth 2003). Although mothers also take an active role in raising their sons, fathers'

parenting practices more closely resemble those of their fathers rather than those of their mothers (Losh-Hasselbart 1987). First, it is imperative to consider whether a man's father was present during the time he was growing up. The absence of one's biological father is hypothesized to directly and indirectly decrease father involvement (Furstenberg and Weiss 2000). The direct portion of this effect is produced by young fathers' proclivity to reproduce the family arrangements they experienced growing up. Father absence may indirectly lead to lower involvement via the mechanism of poor adjustment during adolescence. Young men raised by single mothers experience greater difficulty adapting to the developmental demands of adolescence, which may later reduce their ability to adapt to and actively engage in the father role (Smith et al. 2005).

In addition to the availability of a father figure, men's valuation of this role model is also relevant to their actions as fathers. Past familial relationships influence current parenting behaviors (Cowan and Cowan 1987; Lamb and Goldberg 1982), such that men who forged close relationships with their own fathers may draw on this experience and establish high levels of interaction with their own children. In addition, men who learned to parent from their own fathers demonstrate greater responsibility for and engagement with children (Hofferth 2003). Many men, however, lack role models from whom they can receive guidance regarding caring for children (Dollahite 1998; Jordan, Stanley, and Markman 1999; Moore and Kotelchuck 2004). This dearth of positive male role models presents yet another barrier to men seeking to enact expectations of highly involved fathering.



### *Current Study*

In this second portion of my dissertation, I employ data from the first three waves of the Early Childhood Longitudinal Study Birth Cohort (ECLS-B) to investigate the influence of fathering attitudes on observed father involvement. First, I produce and report on classes of father involvement accounting for men's engagement in play, engagement in care, accessibility, and responsibility. In the second stage of the research, I examine how various factors influence the probability of membership in the identified involvement classes. The conceptual model for this second stage, indicating the variables used and when they were measured, is displayed in Figure 3.1. As shown in the model, I investigate how classes of fathering attitudes impact the likelihood of membership in father involvement classes. In addition, I examine whether the association between fathering attitudes and father involvement strengthens once men's employment characteristics, levels of social support, and fathering examples are accounted for. Data on father involvement are drawn from the third wave, when children were of preschool age. Information on control and independent variables are measured prior to father involvement, generally derived from the first wave. Data on social support and the use of one's father as a model, however, come from wave 2, as they were not collected during the first wave.

By considering multiple dimensions of father involvement, the current study offers a more complex and accurate portrayal of fathering behavior. While Lamb et al.'s (1987) three-dimensional conceptualization of father involvement has received wide recognition in the fathering literature, a number of fathering studies fail to capture all three of these fathering elements. Further, the distinction between fathers' engagement in

play and care used here presents an additional refinement in the conceptualization of paternal involvement. The use of latent classes of father involvement allows a look at these multiple dimensions while retaining parsimony and ease of interpretation. Also important is the exploration of how the relationship between fathering attitudes and behaviors is shaped by occupational and social factors. Whereas it is often assumed that alterations in paid work will facilitate changes in family work (Coltrane 1996), this research takes a key step in isolating precisely how this could occur.

The use of data from the ECLS-B constitutes another strength of the current investigation. First, these data offer nationally representative panel data on resident fathers. Whereas White middle-class fathers have most often been studied, the current study includes fathers from a variety of socioeconomic and racial/ethnic groups. Even the few prior fathering studies that have made use of representative data have generally relied on cross-sectional data. Second, because data come from fathers of a single birth cohort, the analysis controls for age of child, which can influence both fathering attitudes and involvement. Third, the ECLS-B measures information on fathering attitudes, father involvement, and other characteristics directly from fathers, allowing me to respond to others' call for research documenting men's fathering experiences from their own viewpoints (Marsiglio et al. 2000; Marsiglio, Day, and Lamb 2000). Finally, specific measures of fathering attitudes are available, which present a substantial improvement over more widely available measures of general gender egalitarianism or a generally positive disposition toward fathering.

## METHODS

### *Data*

Data from the Early Childhood Longitudinal Study Birth Cohort (ECLS-B), a nationally representative probability sample of children born in 2001, were used in analyses. These data were collected by the U.S. Department of Education, National Center for Education Statistics (NCES) for the purpose of describing and enhancing our understanding of children's early development and experiences. Sampling was conducted using a clustered list-frame design; births registered with the National Center for Health Statistics vital statistics system were used to construct the sampling frame. ECLS-B children represent a variety of socioeconomic and racial/ethnic backgrounds.

Oversamples of a number of groups were selected, including: Asian and Pacific Islander children, American Indian and Alaska native children, Chinese children, twins, and low birth weight children. Data were gathered at multiple time points, including in 2001-02 when children were approximately 9 months old, in 2003-04 when children were around 2 years old, and in 2005-06 when children were of preschool age. Data from each of these three collection periods were used for the current study.

At each wave, parent interviews, which were generally completed by mothers, were first obtained. Following this, resident father questionnaires were administered in cases where a resident father was living in the household with the focal child. In addition to the fathers who completed the resident father questionnaires, the minority of fathers who completed the parent interview rather than the resident father questionnaire was included in analysis. For the parent interviews, the number of completed interviews obtained was 10,700 at 9 months, 9,850 at two years, and 8,950 at the preschool

collection period. The respective weighted unit response rates were 74.1%, 93.1%, and 91.3% (National Center for Education Statistics 2008a; National Center for Education Statistics 2008b; National Center for Education Statistics 2008c). The weighted proportion of cases with a completed parent interview at preschool, among all cases sampled at 9 months, was 63.1%. With regards to the resident father questionnaire, completed questionnaires were received for 6,300 children at wave 1, for 5,850 children at wave 2, and for 6,100 children at wave 3. The corresponding weighted unit response rates were 76.1%, 77.7%, and 87.7% (National Center for Education Statistics 2008a; National Center for Education Statistics 2008b; National Center for Education Statistics 2008c). Cases missing on all indicators used to create the dependent latent class variable were dropped prior to analysis, as were cases in which the same resident father was not present at all three waves. These decisions resulted in an analytic sample of 5,350 resident fathers.

### *Measures*

*Dependent Variable.* Latent classes of father involvement were created to serve as the dependent variable. The classes were constructed using data measured at wave 3, when children were preschool age. Twelve indicators capturing various aspects of father involvement—engagement in play, engagement in care, accessibility, and responsibility—were used to generate the latent classes. Fathers were asked about the frequency of a number of parenting activities through the question: In the past month, how often did you do the following things with your child?

1. Take your child outside for a walk or to play in the yard, a park, or a playground?
2. Play together with toys for building things like blocks, Tinker toys, Lincoln logs, or LEGOs?

3. Prepare meals for your child?
4. Help child to bed?
5. Help child bathe him/herself?
6. Help child dress him/herself?
7. Help child brush his/her teeth?

Indicators 1 and 2 capture men's engagement in play, while indicators 3-7 measure engagement in care. For each indicator, possible responses include more than once a day, about once a day, a few times a week, a few times a month, rarely, and not at all. For analysis, dichotomous measures of each indicator were constructed, specifying whether or not a father is highly involved regarding the given indicator. For the play indicators, fathers who do the activity a few times a week or more frequently are considered highly involved. Completing a care activity about once a day or more is operationalized as high involvement, with the exception of preparing meals, for which the standard for high involvement is more than once a day. These cut-offs are appropriate regarding children's needs.

An eighth indicator was used to capture the accessibility component of father involvement. Fathers were asked to indicate the number of days they ate the evening meal together with their child in a typical week.<sup>1</sup> As for engagement, a dichotomous indicator specifying whether or not a father is highly involved was created. Fathers who eat dinner with their children seven days a week are considered highly accessible.

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<sup>1</sup>For the small number of fathers (N=200) that completed the parent questionnaire rather than the father questionnaire, the question asked about some of the family eating together. These responses were included in analysis, since these fathers, who typically are the primary/sole parent, are likely to be considering their behavior when responding to the question.

The final four indicators assess the responsibility dimension of fathering. Fathers were asked about their involvement in several childrearing decisions: How much influence do you feel that you have in making major decisions about things such as...

9. Discipline?
10. Nutrition?
11. Health care?
12. Education?

Possible responses for each indicator include no influence, some influence, and a great deal of influence. Fathers with a reply of a great deal of influence are considered to be highly involved regarding responsibility.<sup>2</sup>

*Independent Variables.* The primary independent variable, fathering attitudes, was measured using a set of latent classes. The fathering attitudes latent classes are composed of seven indicator variables that assess attitudes regarding fathering. These indicators were measured during the first wave of data collection, when children were 9 months of age, and consist of the following statements concerning men's role as fathers:

1. It is essential for the child's well being that fathers spend time playing with their children.
2. It is difficult for men to express affectionate feelings towards babies.
3. A father should be as heavily involved as the mother in the care of the child.
4. The way a father treats his baby has long-term effects on the child.
5. The activities a father does with his children don't matter. What matters more is whether he provides for them.
6. One of the most important things a father can do for his children is to give their mother encouragement and emotional support.
7. All things considered, fatherhood is a highly rewarding experience.

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<sup>2</sup>Unfortunately, the responsibility questions were not asked of fathers completing the parent survey. In order to retain this important group of respondents for analysis, for the responsibility indicators I created a third category for those who did not receive these questions.

Fathers indicate whether they strongly agree, agree, disagree, or strongly disagree with each statement. Using dummy variables of each indicator, which signify whether a father agrees or disagrees with a given statement, three latent classes of fathering attitudes were generated (see Chapter 2): fathers who favor involved fathering, those who hold adaptive involved fathering as the ideal, and those who value resistant involved fathering. Fathers supporting involved fathering are highly likely to agree with items consistent with the involved father role (items 1, 3-4, and 6-7) and are very unlikely to agree with items in keeping with the provider role (items 2 and 5). Whereas those who favor adaptive involved fathering look similar to those with involved attitudes in many ways, they adapt the involved father role to incorporate some aspects of the provider father ideal. In particular, they are considerably more likely than those in the involved fathering class to agree that men have difficulty expressing affection towards babies and that provision takes precedence over engaging in activities. Finally, the distinguishing trait of the resistant involved fathering class, compared to the other two classes, is these fathers' substantially lower probability of agreeing that fathers should be as involved with children as mothers.

To prepare the attitudes independent variables for analysis, each respondent's probability of membership in each of the three attitudes latent classes was calculated using Bayes's theorem (Lanza et al. 2007). These posterior probabilities were then used to conduct maximum-probability assignment, in which individuals are assigned to the class for which they have the greatest probability of membership (Nagin 2005). For analysis, a set of dummy variables capture the class to which a respondent is assigned

(reference group = involved fathering). Table 3.1 contains variable definitions, means, and standard deviations for the independent and control variables used in analysis.

Other independent variables used in analysis include employment characteristics and social support and fathering examples. Elements of paternal employment assessed include employment status/work hours, job benefits, and job shift.<sup>3</sup> All employment factors come from wave 1 data. A group of dichotomous indicators denote whether a father is not in the labor force, looking for work, employed part-time (less than 35 hours per week), employed full-time 35-44 hours per week, employed full-time 45-54 hours per week, employed full-time 55-64 hours per week, or employed full-time 65 or more hours per week (omitted category = employed full-time 35-44 hours per week).<sup>4</sup> Eligibility for a number of benefits (sick leave with full pay, child care assistance, and flexible hours or flex-time) through a current job were measured through a set of dummy variables (no = reference category).<sup>5</sup> Dichotomous variables were also used to indicate whether a father usually works a daytime shift, evening shift, night shift, rotating shift (shift periodically changes between days to evenings or nights), or other shift (daytime shift = omitted group).<sup>6</sup>

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<sup>3</sup>In preliminary analysis, I also included information on occupational prestige score. However, as this variable was highly correlated ( $r = 0.89$ ) with the control for class, I excluded it from the models presented here. In addition, as the prestige measure only ranged from 27.1 to 64.2, it failed to capture much variation in prestige.

<sup>4</sup>For preliminary modeling, employment status and work hours were coded as separate variables. Due to considerable correlation between them, a combined variable was used for the focal analysis.

<sup>5</sup>Eligibility for additional benefits, including medical or hospital insurance and a dental plan, were included in preliminary analysis. However, these additional benefits were substantially correlated ( $r \geq \pm 0.4$ ) with sick leave eligibility. As sick leave is theoretically more important than insurance eligibility for a father's availability to care for his child, I opted to retain this variable for the results presented.

<sup>6</sup>For some of the employment variables (job benefits and job shift), those who were not working (i.e., did not work for pay in the previous week and were not on leave or vacation) did not receive the question. To



I assess social support using data from wave 2, when children were two years old. Fathers were asked how supportive various important others are of their being a father, including: spouse or partner, in-laws or partner's family, spouse or partner's friends, adult relatives, one's own friends, and co-workers. For each, fathers indicated whether this person or group of people is very supportive, somewhat supportive, neither supportive nor unsupportive, or unsupportive. For analysis, I created a dummy variable indicating whether a person's spouse or partner is very supportive of being a father (reference category = less than somewhat supportive, i.e. unsupportive, neither supportive nor unsupportive, or somewhat supportive). To measure non-spousal social support, I created an index equaling the number of sources other than one's spouse/partner that are very supportive.<sup>7</sup>

Two aspects of fathering examples were used: presence of father and use of one's father as a model.<sup>8</sup> Information on presence of father came from wave 1, whereas father as a model was measured at wave 2. I operationalize presence of father as the number of a man's first 16 years spent residing with his father. Fathers were also asked about whether they use their father as a role model: To what extent do you use the way your father or father figure raised you as a model for raising your own children? Possible

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refrain from losing these cases in analysis, these responses (N=550) were recoded. Fathers who were not working were coded as ineligible for job benefits, and included in the other job shift category.

<sup>7</sup>Initially, dummy variables constructed in a similar fashion to the spousal support variables were created to capture each of the non-spousal sources of support. However, on finding that the various sources of non-spousal support were correlated with one another, I created the non-spousal support index.

<sup>8</sup>In preliminary models, I also included a measure of closeness to one's father. However, closeness was substantially correlated with both father presence and father as a model. I opted to exclude closeness from the analysis presented here, as father and presence and father as a model provide more direct measures of fathering examples.

answers are very much, somewhat, not very much, or not at all. Responses were ordered so that a higher value denotes greater reliance on one's father as a model.

*Control Variables.* A number of personal and family factors measured at wave 1 were controlled for when assessing the impact of fathering attitudes on father involvement. Personal factors used as controls include: region, class, race/ethnicity, age, father type, and religious attendance. An assortment of dummy variables was used to capture geographic region, classified as northeast, Midwest, south, or west (northeast = omitted category). Class was measured using a dummy variable for occupation type indicating those who work in a professional/managerial occupation versus a non-professional occupation. Race/ethnicity was assessed using dichotomous indicators for Hispanic, White non-Hispanic, Black non-Hispanic, Asian non-Hispanic, and other (includes non-Hispanic Native Hawaiian or Pacific Islander, non-Hispanic American Indian or Alaska Native, and non-Hispanic multiple race). In analysis, non-Hispanic Whites were the omitted group.

A continuous measure of father's age at the time of the 9-month interview was used, and father type was operationalized through an indicator for other father (including stepfather, foster father, and other father figure) versus birth/adoptive father. The following question assessed father's religious service participation: How often did you attend religious services in the past year? Available responses are never, about once or twice, several times during the year, about once or twice a month, and nearly every week or more.

Family characteristics controlled for include: marital status, relationship quality, mother's employment status, maternal involvement, child gender, and number of

children. A couple was classified as married versus unmarried (including separated/divorced, widowed, or never married). Fathers' perceived relationship quality was measured through the question: Would you say your relationship is...? Possible responses include very happy, fairly happy, and not too happy, and the variable was reordered so that higher scores indicate greater relationship satisfaction. Mother's employment status was assessed using a set of dichotomous variables denoting whether a mother is employed 35 hours or more per week (i.e., full-time), employed less than 35 hours per week (i.e., part-time), looking for work, or not in the labor force (omitted category = employed 35 hours or more per week). Maternal involvement was assessed through a dummy variable indicating high involvement in outdoor play, which corresponds to indicator 1 of father involvement.<sup>9</sup> Following ECLS guidelines, a composite measure indicating whether the focal child is male or female (male = reference group) measured at wave 3 (with corrections for errors at previous waves) was used to assess child gender. Finally, number of children in the household was controlled for using a continuous measure of the number of household members younger than 18.

### *Method of Analysis*

Latent class analysis (LCA) was used to examine resident fathers' father involvement. LCA isolates a set of discrete, mutually exclusive latent classes of respondents on the basis of an array of observed categorical indicators (Lanza et al. 2007). In the first stage of analysis, I selected the prime base model illustrating classes of

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<sup>9</sup>This measure of maternal involvement captures only mothers' engagement in play. Unfortunately, many of the parenting questions asked of fathers were not also asked of mothers. Other parenting questions asked of mothers refer to the activities of any family member, and thus are not strict measures of maternal involvement. However, since maternal involvement serves as a control in this analysis and is not a primary focus for this study, a single measure of maternal engagement should suffice.

father involvement, using the twelve dichotomous indicators of involvement. A series of base latent class models with various numbers of classes were generated, and an optimal model selected from these based on the following criteria: the likelihood-ratio  $G^2$  statistic, Akaike's Information Criterion (AIC; Akaike 1974), and Bayesian Information Criterion (BIC; Schwartz 1978). Two sets of parameters were then assessed for the prime base model: class membership probabilities ( $\gamma$  (gamma) parameters) and item-response probabilities contingent on class membership ( $\rho$  (rho) parameters). The  $\gamma$  parameters signify the distribution of respondents across the latent classes, whereas the  $\rho$  parameters denote the congruence between the observed indicators and the latent classes. The  $\rho$  parameters range in value from 0 to 1, with values closer to 1 indicating greater correspondence between a specified indicator response and membership in a particular latent class.

For the second stage of analysis, I assessed the influence of fathers' fathering attitudes and other factors on their father involvement class membership through the use of LCA with covariates. This method utilizes a logistic link to assess covariates' predictive power regarding class membership probabilities (Bandein-Roche et al. 1997; Dayton and Macready 1988). That is, LCA with covariates derives  $\beta$  (beta) parameters—logistic regression coefficients for covariates, as well as associated odds ratios, as estimates of class membership prediction. The latent class model takes the form of a standard multinomial regression model (Agresti 2002). For each covariate,  $C - 1$  model parameters (where  $C$  is the number of latent classes) are derived, predicting membership in each of the specified classes in relation to the reference class. Multinomial regression results are best interpreted in terms of odds ratios, by which the likelihood of an

individual belonging in a particular latent class relative to a reference class is estimated. For continuous variables, the odds ratio assesses the change in the likelihood of class membership associated with a unit increase in the independent or control variable. Odds ratios larger than 1 indicate a given variable is related to a higher likelihood of belonging in a specified class relative to the reference class, whereas odds ratios smaller than 1 suggest that the variable leads to a lower likelihood of membership in a specified class relative to the reference class. For categorical variables, the odds ratio indicates how much more likely (if greater than 1) or less likely (if smaller than 1) membership in a specified latent class is, in comparison to the reference latent class, for a particular independent/control variable category relative to the omitted independent/control variable category.

The modeling process proceeded as follows: Model 1 estimates the impact of the primary independent variable, fathering attitudes, on father involvement class membership while controlling for personal and family factors. The association between fathering attitudes and involvement accounting for men's employment characteristics is investigated in Model 2. Finally, Model 3 assesses this association when accounting for social support and fathering examples.

## RESULTS

### *Base Model: Latent Classes of Father Involvement*

The criteria used to select the prime base model—the likelihood-ratio  $G^2$  statistic, AIC, and BIC—appear in Table 3.2. These statistics were calculated for models with two through eight latent classes. Contrasting these criteria across the models with fewer and

greater latent classes reveals the best-fitting model. A model with  $C + 1$  classes is an improvement over a model with  $C$  classes if the likelihood-ratio  $G^2$  statistic, AIC, and BIC decrease substantially. Table 3.2 reveals that each of the criteria decrease noticeably when progressing from the two-class through the seven-class model, denoting improved model fit with each additional class. However, the BIC for the eight-class model exceeds that of the seven-class model, indicating poorer fit. Thus, American resident fathers are best characterized by seven father involvement classes.

Information on the relative size and characteristics of the classes in the seven-class base model are presented in Table 3.3. Here, for reasons detailed below, I have tagged these classes with the following labels: *play-focused fathers*, *sideline fathers*, *responsibility-focused fathers*, *responsibility avoiders*, *reluctant caregivers*, *primary fathers*, and *highly involved fathers*. The most common class, encompassing about one-quarter of resident fathers, engages in reluctant caregiving. Fathers exhibiting sideline fathering comprise a slightly smaller (20%) group, followed by comparable proportions (15%) of responsibility-focused and responsibility-avoidant fathers. Slightly more than one-tenth of fathers demonstrate highly involved or play-focused fathering. Least common, comprising under 3% of fathers—a small but nontrivial amount, are the primary fathers.

The remaining information in Table 3.3 consists of the  $\rho$  parameters, or item-response probabilities. The  $\rho$  parameters illustrate the characteristics of the various latent classes, as well as make clear why the assigned labels are suitable. Ranging from 0 to 1, they denote the probability of falling in a certain item category (either highly involved or not asked) given membership in a particular class. For example, we see that for play-

focused fathers, the probability of being highly involved in outside play with children is approximately 0.52. Let us now review the traits of the different classes, with a focus on the probability of high involvement on four dimensions—engagement in play, engagement in care, accessibility, and responsibility—of fathering. In Table 3.3, the classes, proceeding left to right, are approximately ordered from lower to higher levels of paternal involvement. This ordering is approximate because, as we shall see in a moment, a class may be higher than another on one aspect of father involvement but have a similar or lower likelihood of high involvement on another aspect. To aid the reader, Table 3.4 presents a summary of the classes' key features regarding the four dimensions of paternal behavior.

Let us first look at the play-focused fathers. These fathers demonstrate some engagement in play with children, as indicated by their moderate probability ( $0.4 < \rho < 0.6$ ) of being highly involved in both outside play and play with toys. In contrast, play-focused fathers display lower levels of participation in other dimensions of fathering. They have a very low probability ( $\rho < 0.1$ ) of being highly involved in the majority of care activities (meal preparation, bathing, dressing, and brushing teeth), and a low likelihood ( $\rho < 0.3$ ) of high engagement in helping a child to bed. Their likelihood of high accessibility, indicated by the item on eating dinner with one's child, is also low ( $\rho < 0.3$ ). Finally, play-focused fathers are very unlikely ( $\rho < 0.1$ ) to take high responsibility for children's nutrition, health care, or education, and have a low probability ( $\rho < 0.3$ ) of being highly responsible for discipline.

Moving now to sideline fathers, we see that their response pattern with regards to engagement in play, engagement in care, and accessibility look very similar to that of

their play-focused counterparts. However, men in the sideline fathering class display considerable levels of responsibility. Although their probability of high responsibility for nutrition remains low ( $\rho < 0.3$ ), they show a moderate likelihood ( $0.4 < \rho < 0.6$ ) of being greatly influential regarding children's health care. In addition, these fathers have a moderately high probability ( $0.7 < \rho < 0.8$ ) of being highly responsible for discipline and education. Thus, whereas play-focused fathers only engage with children in play, sideline fathers participate some in two aspects—play and responsibility—of parenting.

The next class of fathers, those who focus on responsibility, looks similar to both the play-focused and sideline fathers in terms of their engagement in play and care. Yet high accessibility to children during evening meals is slightly higher ( $0.3 < \rho < 0.4$ ) among men focusing on responsibility. The distinguishing trait of this class of fathers, from which they receive their name, is their high levels of responsibility. Responsibility-focused fathers' likelihood of being greatly influential regarding children's discipline, nutrition, health care, and education is very high ( $\rho > 0.85$ ).

Turning to the responsibility avoiders, we see a more substantial shift in parenting behaviors. Compared to the groups previously discussed, these fathers participate in play, care, and accessibility to a more considerable extent. Their likelihood of high engagement in both outdoor and indoor play is high ( $0.7 < \rho < 0.85$ ). With regards to care, they display a highly variable ( $0.2 \rho < 0.85$ ) probability of extensive engagement. In particular, responsibility avoiders are less involved in meal preparation and bathing than in aiding children to dress, brush their teeth, or to bed. In terms of accessibility, responsibility avoiders are considerably likely ( $0.4 \rho < 0.5$ ) to be very available to children during evening meals. Although these fathers are considerably involved in play,



care, and accessibility, their central and label-earning trait is their reluctance to accept responsibility for children. They are less involved in responsibility than either the sideline or responsibility-focused fathers, displaying a low probability ( $\rho < 0.3$ ) of exerting great influence on nutrition or health care and a moderate probability ( $0.4 < \rho < 0.6$ ) in reference to discipline or education.

Looking now at the reluctant caregivers, we first see that they engage in play at a similar level as the responsibility avoiders. In contrast, the reluctant caregivers have a somewhat greater likelihood ( $0.5 < \rho < 0.6$ ) of high accessibility, and their pattern of responsibility resembles more closely that of the responsibility-focused fathers. This groups' titular trait is its relatively lower engagement in care in comparison to other parenting dimensions. Not only is their probability of extensive caregiving highly variable ( $0.1 < \rho < 0.75$ ), but also they are less involved in care than the responsibility avoiders. As with the responsibility avoiders, reluctant caregivers are less involved in meal preparation and children's bathing compared to other care items.

The next group, the primary fathers, displays levels of play similar to those of the responsibility avoiders and reluctant caregivers, and resembles the reluctant caregivers in terms of accessibility as well. Their care response pattern also looks similar to that of the responsibility avoiders, with the exception that they are substantially more likely ( $0.5 \rho < 0.6$ ) to be highly engaged in meal preparation. A unique characteristic of this father involvement class is that these fathers have a very high probability ( $\rho > 0.95$ ) of not being asked the four responsibility items (For the other groups, this probability is near 0.). Recall that fathers who completed the parent rather than the resident father questionnaire did not receive these items. I call these men primary fathers because, as fathers received

the parent questionnaire only in cases where the child's mother could not be interviewed, they are the primary parent of the focal child. Although these fathers' responsibility for their children was not observed, it is likely that these men take substantial responsibility, as parent respondents were required to be knowledgeable about the child's care and education.

Finally, let's turn to the highly involved fathers. Compared to the other involvement classes, these men have a greater likelihood of high involvement on virtually every item. They demonstrate a very high probability ( $\rho > 0.85$ ) of extensive engagement in outdoor and indoor play, as well as in each area of responsibility. With regards to accessibility, highly involved fathers display a moderately high likelihood ( $0.6 < \rho < 0.7$ ) of great availability to children during dinnertime. Although their probability of great engagement in meal preparation is only moderate ( $0.5 < \rho < 0.6$ ), they have a moderately high probability ( $0.7 < \rho < 0.8$ ) respecting children's bathing. Most noteworthy is the involved fathers' very high likelihood ( $\rho > 0.9$ ) of offering extensive help to children with dressing, brushing teeth, and getting to bed.

#### *LCA with Covariates: Predicting Father Involvement Class Membership*

When conducting LCA with covariates, play-focused fathers—who demonstrate the overall lowest level of paternal involvement, were used as the reference class.<sup>10</sup>

Although controls were included in all models, I present and interpret findings for the

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<sup>10</sup>Alternatively, I ran models using highly involved fathers as the reference class. Although changing the reference class reveals different information regarding significant differences between classes, the overall impact of the various independent variables remains the same. Here, I use play-focused fathers as the reference group because comparing membership in classes with higher patterns of involvement to the group with the lowest form of involvement is intuitively appealing and aids interpretation.

independent variables only. In the following discussion, I address results that are significant at or below the .05 level (two-tailed tests).

Results for Model 1, which assesses the influence of fathering attitudes on father involvement class membership, are presented in Table 3.5. As for the base model, in the regression tables the classes are approximately ordered, going left to right, from lower to higher levels of paternal involvement. Fathering attitudes exert a significant effect on men's involvement patterns, such that attitudes other than involved attitudes generally discourage patterns of somewhat higher involvement. Relative to the play-focused class, fathers with adaptive involved rather than involved attitudes are about 36% less likely to engage in sideline fathering. Possessing adaptive involved ( $e^{\beta} = 0.73$ ) and, to a greater degree, resistant involved ( $e^{\beta} = 0.44$ ) attitudes decreases the odds of membership in the responsibility-focused class compared to the play-focused class.

Table 3.6 displays findings from Model 2, which tests the impact of attitudes and employment characteristics on involvement class membership. Once employment traits are incorporated, the relationship between fathering attitudes and father involvement alters somewhat. As in Model 1, fathers with resistant involved as opposed to involved attitudes are less likely to demonstrate responsibility-focused relative to play-focused behavior. However, a new finding for adaptive involved attitudes emerges. The likelihood of being a highly involved rather than play-focused father is about 43% greater for men holding adaptive involved as opposed to involved attitudes. That fathering attitudes have a stronger impact on highly involved fathering once employment factors are considered suggests the existence of work-family conflict.

Independently of attitudes, employment characteristics are consequential for paternal involvement patterns. Looking at work status/hours, we see that, in general, fathers are involved in more aspects of fathering—care, accessibility, and/or responsibility in addition to play—when they are less attached to the labor force or work fewer hours. The odds of being a highly involved rather than play-focused father are about 87% greater for fathers not in the labor force compared to those who work a typical (i.e., full time 35-44 hour) workweek, and more than double for those working part time. Removal from the work force is also associated, to varying degrees, with a higher probability of membership in the responsibility avoider, reluctant caregiver, and primary father classes. Working longer hours tends to decrease father involvement. Working 55-64 hours each week rather than 35-44 hours is associated with 22%-lower odds of being a reluctant caregiver as opposed to play-focused, meaning that a father is accessible to and responsible for his child in addition to playful. For those employed 65 or more hours per week, this negative effect is larger in magnitude ( $e^{\beta} = 0.56$ ). Finally, men who work a 55-64 hour workweek are about half as likely as those working a typical workweek to be highly involved rather than play-focused fathers.

Turning to job benefits, we see that eligibility for various benefits encourages more involved patterns of paternal behavior. Men eligible for sick leave are more likely to be responsibility-focused ( $e^{\beta} = 1.24$ ) or highly involved ( $e^{\beta} = 1.33$ ) as opposed to play-focused. Child care assistance distinctly promotes reluctant caregiving, increasing the odds of membership in this group by about 35%. Thus, although fathers with this perk can hire someone else to care for their child, they not only play with children but are also

accessible and responsible. Flexible scheduling bolsters highly involved fathering ( $e^{\beta} = 1.62$ ), better enabling men to participate in all fathering dimensions.

Information on work shift is also useful for understanding patterns of father involvement. With the exception of evening shift, working a non-day shift is associated with greater engagement in care. Men who work a night ( $e^{\beta} = 0.61$ ) or rotating ( $e^{\beta} = 0.37$ ) shift rather than days are unlikely to be reluctant caregivers as opposed to play-focused. The likelihood of being highly involved, or participating in all aspects of fathering, is about 62% greater for those working some other shift rather than days, and this positive effect is still larger for men working a night shift ( $e^{\beta} = 1.86$ ).

Findings for Model 3—which estimates the relevance of fathering attitudes, social support, and fathering examples for paternal involvement—are contained in Table 3.7. The impact of fathering attitudes on involvement weakens somewhat, rather than strengthens, after including information on social support and fathering examples. Although the odds of being a sideline as opposed to play-focused father are lower for fathers with resistant involved ( $e^{\beta} = 0.29$ ) rather than involved attitudes, there are no differences in class membership between those with adaptive involved attitudes and those who endorse involved fathering. This weakening in the impact of fathering attitudes suggests that there is no strong conflict between men's attitudes and the social support or fathering examples they receive.

Both social support and fathering examples exert influence on father involvement. In general, a spouse or partner who is very supportive of fathering encourages fathers to be involved in multiple dimensions of parenting—care, accessibility, and/or responsibility in addition to play. Relative to the play-focused class, men with very

supportive spouses or partners are more likely to be a sideline father ( $e^{\beta} = 1.48$ ) or responsibility-focused ( $e^{\beta} = 1.85$ ). The impact of spousal support on highly involved fathering is even greater, such that the odds of high involvement nearly triple. The only more-involved form of fathering that isn't promoted by spousal/partner support is primary fathering. Instead, fathers with very supportive partners are only about 27% as likely to engage in primary fathering rather than play-focused parenting. It appears that, due to a lack of a supportive spouse or partner, these fathers take on a principal parenting role. Greater support from sources other than a spouse or partner also promotes more-involved fathering patterns relative to play-focused parenting, including: sideline, responsibility-focused, reluctant caregiver, primary, and highly-involved fathering. The impact of having an additional very supportive non-spousal source, which ranges from about a 13% to a 26% increase, is similar for membership in these various classes.

Fathering examples also significantly impact paternal behavior, although effects for fathering examples are smaller in magnitude than those for social support. Curiously, presence of one's father demonstrates a slight negative influence on the most-involved forms of fathering. Relative to membership in the play-focused class, an additional year spent growing up with one's father decreases the likelihood of being a primary or highly involved father by about 2% and 4%, respectively. In contrast, an increase in using one's father as a parenting model is related to a higher likelihood of membership in the highly involved class ( $e^{\beta} = 1.11$ ). Thus, the presence of a fathering role model in and of itself does not bolster involvement across various aspects of fathering. Rather, exposure to a positive role model is necessary.

## DISCUSSION AND CONCLUSION

Recent sociological research indicates that father involvement promotes positive outcomes for offspring, romantic partnerships, and for fathers as well (Marsiglio et al. 2000; Marsiglio, Day, and Lamb 2000). To aid our understanding of fathering, we need to investigate the degree to which fathering practices are shaped by men's fathering attitudes. Although men report that they emphasize parenting over paid employment (Lamb and Sagi 1983; Pleck 1983), researchers continue to find evidence that fathers do not share equally in childrearing with mothers (e.g., Pleck and Masciadrelli 2004). In this work, I assess the relationship between men's fathering attitudes and paternal involvement using nationally representative panel data from resident fathers. Further, I explore whether men encounter structural barriers—including work-family conflict, low levels of social support, and/or a lack of positive fathering examples—to fathering the way they would like.

Consistent with previous studies suggesting that paternal behavior falls short of the ideal of the highly involved father (e.g., Dienhart 2001; McMahon 1995), my results indicate that American resident fathers' involvement does not measure up to their parenting attitudes. First, there is substantially greater variation (i.e., a greater number of classes) in involvement compared to fathering attitudes. Whereas each attitudinal profile emphasizes involved fathering to some extent, behavioral classes range from one that encompasses involvement in a single aspect of fathering—engagement in play—to one that includes participation in all dimensions of fathering—engagement in care, accessibility, and responsibility in addition to play—analyzed. Second, although a majority (89%) of men values involved fathering, a minority (about 12%) engages in

highly involved fathering on all dimensions. If we consider men who engage in highly involved fathering on at least one dimension, the proportion increases to 55%, narrowing but still not closing the gap between paternal attitudes and behavior.

In keeping with role identity theory (Goffman 1961), I further find that men's attitudes about the paternal role are associated with their fathering behavior. As expected, men with adaptive involved attitudes are more likely than those with involved attitudes to focus on a single aspect of fathering—playing with children—than to demonstrate patterns of involvement that include both play and responsibility. This result is still stronger for those possessing resistant involved attitudes. However, contrary to expectations, when employment characteristics are controlled for, adaptive fathers are more likely than those with involved attitudes to be highly involved in all aspects of fathering. This finding recalls Coltrane's (1996) assertion that men may become more involved even when they lack a strong commitment to fathering. It is possible that when adapting the highly involved father role, these men are defining fathering in a way that is distinct from mothering. As care work in general and women's caring in particular are devalued (England 2005), this distinct definition may allow men to become highly involved with children without challenging their sense of masculinity or value. Alternatively, the different ways of enacting this adaptive involved attitude may reflect varying interpretations of this adaptation.

I further find evidence that fathers experience work-family conflict. Once employment factors are accounted for, the influence of fathering attitudes on father involvement changes. That is, once considering the possibility of work-family conflict, fathers with adaptive involved attitudes are more likely to engage in highly involved



fathering. All employment characteristics considered—including work status/hours, job benefits, and work shift—are relevant for paternal behavior.

With regards to work status/hours, men who are out of the labor force—meaning that they are effectively removed from the risk of encountering work-family conflict—tend to be involved with children in multiple areas rather than focus exclusively on play with children. This is consistent with Hofferth's (2003) suggestion that out of work fathers engage more with children to redress shortcomings in financial provision. However, it should be noted that this pattern of greater involvement is only true for men who are voluntarily out of the work force; looking for work is not associated with father involvement. As predicted by the time availability approach (Becker 1981; Geerken and Gove 1983), results indicate that fathers working part time are substantially more likely to participate in all dimensions—engagement in play, engagement in care, accessibility, and responsibility—of fathering. In contrast, fathers who work full time plus are more likely than those who have a moderate (35-44 hour) full time workweek to limit their fathering to one or two aspects of parenting—specifically, play and/or responsibility. Thus, time demands at work (Dollahite 1998) and attendant occupational stress (Menaghan 1991) constrain these men's ability to care for children or be accessible to them.

As suggested by Dollahite (1998), access to a variety of job benefits—including sick leave, child care assistance, and flexibility—promotes paternal involvement. Making sick leave and flexible hours available to fathers encourages highly involved fathering, indicating that the ability to adapt one's hours allows a father to adjust to his children's schedule and needs and thereby decreases work-family conflict (Gareis and Barnett

2002). Eligibility for child care assistance is related to reluctant caregiving, or being accessible and responsible in addition to engaging in play. It is likely that the availability of child care aid, particularly at one's work site, helps fathers' transition from work to involvement with children (Ashforth, Kreiner, and Fugate 2000).

A man's work schedule also relates to his experience of work-family conflict. Fathers who work a non-day shift are more likely to be highly involved with children on multiple dimensions of fathering, particularly engagement in care. This finding is in accordance with previous work (Coltrane 1996) determining that working a non-day schedule promotes participation in child care. Working a rotating shift likely works in a way similar to flexible hours, whereby fathers exert some control over their schedules and adapt them to children's availability. Being scheduled for the night shift has a particularly strong impact on highly involved fathering, likely because it removes fathers to the workplace during the time that children are sleeping and thus less available for or needful of parental interaction.

In contrast to employment factors, it does not appear that the levels of social support or types of fathering examples to which fathers are exposed impede their agency. When accounting for social support and fathering examples, the influence of fathering attitudes on behavior does not increase but rather weakens somewhat. As is asserted by Dollahite (1998), it appears that men derive sufficient encouragement for parenting from their social environment. A possible explanation for the weakened effect of paternal attitudes is that social support serves as an intervening variable. As individuals prefer to interact with those who are similar to them (McPherson, Smith-Lovin, and Cook 2001), fathers likely seek out social networks that support their views of fathering. These

selected networks, in turn, may reinforce more-involved patterns of father involvement. As for fathering examples, it is likely that the impact of attitudes declines because fathering examples shape both paternal attitudes and behavior.

Although men's social environment appears to be consistent with men's fathering attitudes, both social support and fathering examples are relevant for paternal behavior. In accordance with previous research (e.g., Dienhart and Daly 1997; Doherty, Kouneski, and Erickson 1998; Gerson 1997), I find that high levels of social support, both from spouses/partners and other sources, tend to encourage more engaged patterns of involvement. Whereas non-spousal support diverts men from play-focused fathering to a variety of involvement classes, having a very supportive spouse or partner particularly fosters high involvement across all dimensions of fathering. Thus, children's mothers play a unique and key role in enhancing fathering (Bronte-Tinkew, Scott, and Horowitz 2009). The influence of fathering examples for paternal involvement, though of a smaller magnitude than that of social support, is also noteworthy. I find that experience with a positive fathering role model—meaning a father whose example one follows in his own parenting—is more important for the promotion of highly involved fathering than simply the availability of a role model. Indeed, the presence of a man's father while he was growing up slightly discourages the most-involved fathering patterns. This likely reflects the fact that many of the fathers studied here were raised in the 1960s and 70s, prior to a cultural shift emphasizing engaged fathering (Hochschild 1989).

The current study substantially contributes to our knowledge of resident fathers' fathering attitudes and behavior, but is not without limitations. One particular concern is the possibility of social desirability bias, whereby men overreport either their attitudes

regarding paternal involvement or involvement itself. Although this could lead to higher estimates of fathering, other results are less sensitive to this potential issue. As it is unlikely that men would overreport attitudes favoring involvement to a far greater extent than involvement, the disconnect between men's attitudes and behavior is unlikely to be explained away by social desirability bias. In addition, that I find evidence of a relationship between fathering attitudes and involvement suggests that the measures used here are useful.

An additional limitation is that of selection. That is, the data used here may not be representative of all resident fathers. The ECLS-B sample was selected with the aim to represent American children born in 2001, rather than resident fathers. In comparison to the general population, the sample likely has a lower proportion of stepfathers and other father figures, whom children generally encounter when they are of an older age. Moreover, attrition likely results as some fathers leave the child's household due to the break-up of the parental relationship. As a result, it is likely that the data, compared to the general population, are selective of fathers who are more involved in childrearing. This is likely because father involvement is generally lower for resident nonbiological fathers (Harris and Ryan 2004) and nonresident biological fathers (Carlson 2006) than for resident biological fathers. If the fathers studied here are somewhat more engaged than resident fathers in general, estimates of the more involved classes may be too large. However, it is less likely that inferences about the relationship between fathering attitudes and involvement are impacted.

Although the current analysis aids our understanding of fathering, more research in this area is needed. First, study of the relationship between fathering attitudes and

paternal involvement among nonresident fathers—who face increased and unique barriers to engaged parenting compared to resident fathers—is necessary. Another topic of importance is the impact of fathering and men’s work-family conflict for a variety of outcomes. Possible issues of interest include children’s cognitive and socioemotional development, fathers’ life satisfaction, and parental relationship quality and stability. In particular, future research should test whether outcomes are more positive when men’s work-family conflict is minimized and fathers can enact their fathering attitudes.

In conclusion, I find evidence that American resident fathers experience work-family conflict, which can interfere with their ability to participate in childrearing to the extent they would prefer. Thus, findings that fathering behavior lags behind the expectations of the highly involved father role (e.g., Bretherton, Lambert, and Golby 2005; Parke 1996) can be partially explained by the barriers men encounter in enacting their attitudes for high involvement with children. Although men’s work-family conflict presents a key barrier, men’s social environment poses less of a concern. That is, it appears that the social support and fathering examples American fathers receive are more consistent with their desired ways of fathering. This research is relevant to social policy and to those who support coparenting. Specifically, it suggests that increasing the availability of family-friendly work policies can be beneficial for men as well as women. There is a need to challenge the assumption held by many employers that work-family policies are created for and solely serve working mothers (Pleck 1993). Although more can be done to encourage men to take advantage of available policies (Hochschild 1997), I find that simply being eligible for a number of job benefits—sick leave, child care assistance, and especially flexible scheduling—increases the likelihood that men are

highly involved across multiple dimensions of fathering. One much-needed change is the creation of policies aimed at curbing work hours, which have been increasing in recent years for those in professional and managerial occupations (Jacobs and Gerson 2004). Such changes in the structure of the workplace can help to decrease the gap between societal expectations for involved fathering and observed paternal behavior.

## CHAPTER 4

### INFLUENCE OF FATHERING PROFILE ON PRESCHOOLERS' COGNITIVE DEVELOPMENT: FOCUS ON THE COMBINATION OF FATHERING ATTITUDES AND INVOLVEMENT

In recent years, fathers' contributions to family life have been increasingly recognized and studied (Goldberg, Tan, and Thorsen 2009; Marsiglio et al. 2000). Evidence suggesting that fathers, in addition to mothers, often engage in beneficial parenting practices has enhanced social researchers' enthusiasm for examining fatherhood. Fathers' attachment to, direct involvement with, and provision of financial resources to children are related to children's well-being in areas including social skills, cognitive development, and psychological outcomes (e.g., Amato and Rivera 1999; Bronte-Tinkew et al. 2008; Lamb 1997a; Marsiglio et al. 2000; Parke 2002b; Pleck and Masciadrelli 2004; Shannon et al. 2002; Starrels 1994; Williams, Radin, and Allegro 1992).

Although attention regarding the impact of father involvement on child well-being has increased in general, considerably less research has investigated the relevance of fathering for cognitive development, compared to research on children's socioemotional outcomes (Goldberg, Tan, and Thorsen 2009). Features of the current social context include demands for parents' greater investment in children's schooling (Hill and Taylor 2004) and concerns over whether future American workers are receiving the education needed to ensure that America remains competitive in a globalizing economy (Bruininks,

Keeney, and Thorp 2010). In light of this context, greater attention to American children's cognitive growth and educational achievement is needed. A crucial preliminary step is the assessment of cognitive functioning in young children, as early cognition lays the foundation for higher thought processes and later academic achievement (Ejiri and Masataka 2001). The current study advances our understanding in this area by illuminating the relevance of family factors and interaction dynamics for child cognition.

To date, much of the extant research on the topic of fathering and children's cognitive outcomes has focused on the impact of direct father involvement. Less attention has been devoted to the relevance of men's fathering attitudes—that is, their expectations for themselves as fathers—for children's development. Worth noting here are findings of substantial mismatch between men's fathering attitudes and their level of involvement. For example, Bronte-Tinkew et al. (2008) determined that despite their expression of a more positive view of the fathering role, fathers continue to report relatively low levels of caregiving activities. Thus, there is reason to believe that with regards to fathering, the consistency between attitudes and behavior varies as it does in other areas of family life (see, for example, Deutsch 1999; Franco, Sabbatini, and Crosby 2004). It remains to be seen whether variation in men's fathering profiles—that is, the combination of fathering attitudes and involvement—is consequential for children's development.

In this third and final component of my dissertation, I examine the influence of American fathers' fathering profiles—which encompass both their fathering attitudes and actual paternal involvement—on the cognitive outcomes of their preschool-aged children. I address this topic using nationally representative panel data from the Early Childhood



Longitudinal Study Birth Cohort (ECLS-B). In particular, I determine whether children's literacy and mathematics skills improve when fathers' involvement is consistent with their expectations for themselves as fathers. In addition, I investigate whether fathering profile affects children's literacy and mathematics abilities in a similar way and to a similar degree, and whether fathering differentially impacts daughters and sons. A strength of the current study is that information on fathering was obtained from fathers whereas information on child development was derived from direct child assessments. This reduces the likelihood of shared-method variance (Bronte-Tinkew et al. 2008; Pleck 2007), and thereby provides a more conservative test of the influence of fathering on children's cognitive development. Resulting findings make clear whether the debate surrounding fathering and child outcomes should shift from a focus on the general level of father involvement to enabling fathers to be the type(s) of fathers they desire to be.

## BACKGROUND

Here, I review literature relevant to the study of the influences of fathering on children's cognitive development. I first address theory suggesting that positive father involvement promotes intellectual growth in children, including a discussion of ways in which paternal participation may enhance cognitive development in ways unique from maternal involvement. I then briefly review empirical evidence regarding the relationship between father involvement and children's cognitive outcomes. In the next section, I discuss how fathering conceptualized as more than father involvement may relate to child development. Specifically, I attend to theory and research suggesting that fathering attitudes impact cognition in children, and assert a need to examine whether fathering

profile—encompassing both fathering attitudes and fathering behavior—is material to children’s intellectual growth. I then discuss how the impact of fathering profile on cognition may vary for girls versus boys. Finally, I outline the research goals and contributions of the current study.

### *Father Involvement and Cognitive Development*

A growing body of literature discusses both theoretical mechanisms and empirical evidence regarding the influence of father involvement upon children’s cognitive skills. Father involvement is theorized to influence child outcomes through multiple pathways (Cabrera and Tamis-LeMonda 2000; Pleck 2007). Paternal participation can impact child development directly, or may do so indirectly via its positive impact on mothering and the larger family context (Gable, Crnic, and Belsky 1994; Pleck 2007).

Four theoretical perspectives are useful for understanding the direct relationship between father involvement and children’s outcomes—socialization theory, attachment theory, social capital theory, and ecological theory. Socialization theory asserts that children learn through engaging with, observing, and modeling their parents (Bandura 1969). This learning process is influenced by the level of parental involvement (Lamb et al. 1985), such that positive parental socialization fosters a child’s cognitive development, instrumental competencies, and school readiness (Coleman 1988; Kohn 1977; Ogbu 1981). Also important, paternal involvement enhances the social learning process in other ways. Father engagement in care activities with children both cultivates a stronger and higher quality father-child relationship (Palkovitz 1984) and augments a father’s self-confidence and competence with regard to parenting (Almeida, Wethington,

and McDonald 2001). Through these mechanisms, greater paternal involvement is related to more effective socialization and enhanced child development (Baumrind 1972; Baumrind 1978; Baumrind 1991).

Bretherton's (1985) contemporary attachment theory also predicts a direct positive relationship between father involvement and children's cognitive development. According to attachment theory, stable and secure attachment relationships with attachment figures such as fathers afford young children a "secure base" from which to explore the world. By providing children a heightened sense of support and protection, paternal participation promotes skills acquisition and cognitive development (Lamb 1997b).

Social capital theory suggests that fathers facilitate their children's cognitive development through their alliance with other individuals and groups in the wider community (Marsiglio et al. 2000). Fathers connect their children to both kin and non-kin networks (Coleman 1988). Although all fathers link their children to the wider world to some degree, higher levels of father involvement serve to activate these social ties, promoting child growth to a greater degree. Structural integration (or closure) in children's social networks results when fathers maintain association with their children's neighbors, teachers, coaches, and ministers. Structural integration in turn fosters young people's development by providing them with more consistent guidance and treatment (Marsiglio et al. 2000).

A final theory informative for understanding father's influence on children's cognitive abilities is ecological theory (Bronfenbrenner 1979; Bronfenbrenner 1986). This perspective avers that child development is molded at a number of ecological

“levels” or “systems,” ranging from microsystems—face-to-face associations between a child and individuals such as parents, teachers, and peers—at the innermost level to chronosystems—historical change in relationships, social policies, and cultural scripts—at the broadest level. Fathers directly influence children’s development as key microsystem partners. This influence occurs through “proximal process,” a “process of progressively more complex, reciprocal interactions between an active, evolving biopsychological human organism and the persons, objects, and symbols in its immediate environment (Bronfenbrenner 1994:1644).”

Although social scientists generally agree that positive paternal involvement is beneficial for cognitive development in children, there is disagreement regarding whether father involvement impacts children in a way that is more similar to or distinct from maternal involvement. Whereas many researchers assert that very little about parent gender is relevant regarding influences on children (e.g., Hewlett 1992; Lamb 1997a), others argue that fathers aid children’s cognitive growth in unique ways (e.g., Lewis 1997; Paquette 2004; Stacey 1998). Paquette (2004) asserts that mothers and fathers interact differently with their children in a complementary manner. Fathers differ from mothers in that mothers are more likely to comfort and calm children, while fathers excite and momentarily destabilize children (Grossmann et al. 2002; Labrell 1996; Paquette 2004). Because both regularities and irregularities are necessary for cognitive development (Labrell 1996), children benefit from experiencing these different behavior styles (Cabrera and Tamis-LeMonda 2000). In addition, children’s cognitive development is promoted by fathers’ greater tendency than mothers to use unfamiliar

words with children (Lewis 1997; Ratner 1988) and to ask children to clarify or reformulate thoughts (Tomasello, Conti-Ramsden, and Ewert 1990).

Consistent with theory, prior studies provide empirical evidence of a relationship between paternal involvement and children's cognitive development (Pleck 2007; Sarkadi et al. 2008); research failing to find this association (e.g., Hunter et al. 1987) is rare. Early studies, which generally relied on small samples of middle-class families, found father involvement to have implications for intellectual outcomes in children during infancy and at preschool age (Clarke-Stewart 1980; Osborn and Morris 1982; Radin 1981). More recent research replicates this finding (e.g., Flouri and Buchanan 2004; Shannon et al. 2002). Bronte-Tinkew et al. (2008), using a nationally representative sample of young children, demonstrated that positive father-child interactions reduce cognitive delay in infants.

### *Moving Beyond the Sole Investigation of Father Involvement*

There is a need to understand how fathers may influence their children's cognitive abilities in ways other than through direct involvement with offspring. In particular, men's fathering attitudes may be material for the quality and quantity of father-child interactions. Research assessing the relevance of fathering attitudes for intellectual development is sparse in comparison to studies investigating the link between father involvement and cognitive growth in children. However, theory on the topic suggests that men's fathering attitudes are related to children's cognitive development, independently of their father involvement. From a family systems perspective, fathers' attitudes and perceptions regarding their father role influence the childrearing decisions they make.

These decisions, in turn, have important consequences for children (Arditti and Kelly 1994).

In support of family systems perspective, Bronte-Tinkew et al. (2008) determined that having a father with a more positive attitude toward his role as a father, in comparison to a less positive perception of his role, is associated with lower odds of cognitive delay with regards to exploring objects with a purpose. This finding was significant in a model including covariates on father involvement. However, in the same study no relationship was found between men's perception of the father role and infants' likelihood of cognitive delay with regards to babbling.

Whereas fathering behavior and attitudes have long been considered as separate theoretical constructs, it is plausible that they comprise separate dimensions of one's fathering profile. Theories on the impact of dissonance or discrepancy between attitudes and behavior suggest that men's fathering profiles—in particular, the degree of similarity or dissimilarity between fathers' fathering attitudes and actual involvement—may have implications for children's cognitive development. Previous research on family life suggests that discrepancies between ideology and activities are relatively common, particularly with regards to housework and child care (Bittman and Pixley 1997; Hochschild 1989; Kroska and Elman 2009; McHale and Crouter 1992). Although people generally attempt to affirm their identities and beliefs through their behavior, this sometimes is not possible due to social and economic factors (Corrigall and Konrad 2007; Crompton and Lyonette 2005; McRae 2003).

Notwithstanding general agreement among social scientists that dissonance between familial attitudes and behaviors commonly occurs, theories differ in their

description of the consequences of such dissonance. Cognitive dissonance and self-consistency theories suggest that discrepancies between fathering expectations and behavior negatively impact child development. Proponents of cognitive dissonance theory assert that individuals experience negative arousal when they conduct themselves in a way that is inconsistent with their attitudes (Abelson 1968; Festinger 1964). This negative arousal generally takes shape in the form of distress (Burke 1991; Burke 1996; Kroska 1997). Feelings of distress due to inconsistencies between attitudes and behavior are especially severe for highly salient or central role identities (Burke 1991; Thoits 1991). As fathering is a central role for a great many fathers (Lamb and Sagi 1983; Pleck 1983), discrepancies between fathering attitudes and father involvement have the potential to generate high levels of distress in fathers. Because elevated levels of stress inhibit effective parenting (Halme et al. 2006; Magill-Evans and Harrison 2001), fathering profiles characterized by greater dissimilarity in fathering attitudes and behavior are likely related to lower levels of cognitive ability in children.

According to self-consistency theory, a modification of cognitive dissonance theory, attitude-discrepant behavior decreases individuals' sense of being a good and competent person (Aronson 1968; Thibodeau and Aronson 1992). Such feelings negatively impact one's self-evaluation, self-efficacy, and perception that they are actively fulfilling role expectations (Kroska 2009). As fathers' self-confidence and competence with regard to parenting is related to outcomes in children (Almeida, Wethington, and McDonald 2001), I expect that fathering profiles characterized by greater dissimilarity in fathering attitudes and involvement are problematic for children's cognitive development.

In contrast to cognitive dissonance and self-consistency theories, compensatory self-enhancement theory alludes to a positive impact of discrepancy among fathering expectations and behaviors upon children's cognitive development. Proponents of compensatory self-enhancement theory, like adherents of self-consistency theory, assert that discrepancies between attitudes and conduct threaten individuals' self-image. However, the self-enhancement perspective suggests that individuals react to these inconsistencies in a positive way by inflating their self-evaluation and self-image (Baumeister, Dale, and Sommer 1998; Kroska 2009). Because men's self-image and feelings of competence as fathers promote positive fathering (Almeida, Wethington, and McDonald 2001), dissimilarity among fathering expectations and behavior may enhance cognitive development in children.

There are, however, two shortcomings of compensatory self-enhancement theory that may make it less useful for understanding the relationship between fathering profile and children's intellectual abilities. First, although there is evidence of higher reports of self competence among those encountering attitude-behavior discrepancies (Kroska 2009), it is unclear whether these reports correspond with higher levels of actual self competence. It is likely that the latter are key to understanding the impact of fathering on child development. Second, some have suggested that individuals achieve self-enhancement by inflating aspects of their self-image in an area other than the one where the discrepancy occurs (Greenberg and Pyszczynski 1985; Kroska 2009). If men experiencing attitude-behavior discrepancies with regards to fathering respond through compensation in a realm other than fathering, benefits to child development are less likely.



Although previous studies have not (to my knowledge) directly assessed the influence of fathering profiles on children's intellectual abilities, prior research has examined the nature of the consequences of attitude-behavior dissonance for other outcomes, yielding mixed findings. In support of cognitive dissonance and self-consistency theories, attitude-behavior inconsistencies have been found to relate to poor mental health (Goldberg and Perry-Jenkins 2004; Lennon and Rosenfield 1994), anxiety (Klein et al. 1998; Parry 1987), decreased life satisfaction (Mederer and Weinstein 1992), reduced feelings of competence (Krause and Markides 1985; McHale and Crouter 1992), increased distress (Goldberg and Perry-Jenkins 2004; Hock and DeMeis 1990), and parental adjustment difficulties (Kalmuss, Davidson, and Cushman 1992). However, other work provides evidence of positive consequences of discrepancies (e.g., Baumeister, Dale, and Sommer 1998; Tichenor 2005). Kroska (2009) found that, for men, discrepancies are negatively associated with distress and positively related to feelings of oneself as a good and active father. Finally, it may be that variations in the combination of men's fathering attitudes and behavior do not affect children's cognitive development. Unlike mothers (Hays 1996; Hochschild 1989), fathers are not highly self-critical and rarely feel inadequate in response to perceived shortcomings in fulfilling family obligations (Marsiglio 1995b; Nock 1998; Simon 1995; Simon 1997).

### *Relevance of Child's Sex*

Previous research finds that children's gender has ramifications for how parents engage with and treat children (Lytton and Romney 1991; Raley and Bianchi 2006; Tucker, McHale, and Crouter 2003). Although parents behave in similar ways regarding

their daughters and sons in many areas (Aldous, Mulligan, and Bjarnason 1998; Mitchell, Booth, and King 2009), there is evidence that fathers spend more time with sons (Hofferth and Anderson 2003; Tucker, McHale, and Crouter 2003). In addition, relationships between fathers and sons tend to be closer than those between fathers and daughters (Mitchell, Booth, and King 2009; Starrels 1994).

Whereas gender-differentiated levels of paternal involvement have been studied, Mitchell et al. (2009) assert that more knowledge is needed on whether and how fathering influences sons and daughters in disparate ways. Socialization theory, introduced above, suggests that children are more likely to model and identify with their same-sex parent. Indeed, fathers may feel that they perform a marked role in their sons' development (Raley and Bianchi 2006), though this tendency may be less pronounced now than in the past (Pollard and Morgan 2002). In addition to men's belief that they have special knowledge to share with sons (e.g., how to be a man), father-son interactions may better develop due to higher similarity of interests (Raley and Bianchi 2006). As a result, father's participation may be more beneficial for boys than for girls (Furstenberg and Weiss 2000; Lamb 1981).

It is possible that one way in which fathering divergently impacts girls versus boys relates to the way in which fathers respond to dissonance between fathering attitudes and behaviors. In particular, it may be that fathers with sons react in a way conforming to self-consistency-theory, inflating their self-image, which leads to more positive fathering and better outcomes for sons. This reaction is likely triggered by men's sense that they, as men, are especially adept at socializing boys, as well as their confidence that they share a common ground with their sons. However, these measures

cannot be relied upon when interacting with daughters. In their absence, fathers with girls may respond to dissonance in a way congruent with cognitive dissonance and self-consistency theories, leading to poorer outcomes for girls.

### *Current Study*

In this third and final portion of my dissertation, I assess the influence of men's fathering profiles—incorporating fathering attitudes and actual involvement—on preschoolers' cognitive development using data from the first and third waves of the Early Childhood Longitudinal Study Birth Cohort (ECLS-B). The corresponding conceptual model showing the variables used and the time points at which they were measured is found in Figure 4.1. Data on controls and fathering profiles are drawn from wave 1, at a point prior to the measurement of cognitive development in preschool (wave 3). As shown in the model, I assess the influence of classes of fathering profiles on two aspects of children's cognitive development, controlling for a number of father, child, and family factors. Specifically, I focus on whether children's literacy and mathematics abilities are positively impacted when fathers' attitudes for high involvement are combined with high levels of actual involvement. Also, I test whether the influence of fathering profile on cognitive outcomes differs according to child's sex. I further examine whether preschoolers' literacy and mathematics skills are similarly related to fathering profile.

This study addresses a number of limitations that persist in research on fathering and children's cognitive outcomes. First, the current research offers a theoretical contribution. Developmental theory has generally focused on the mother as the primary

and most influential parent, viewing the father solely as a second parent or support to the mother (Paquette 2004). Findings from this study aid the advancement of theory focusing on the unique contribution of fathering to child development. This theoretical shift is particularly important as the family context shifts from mothers serving as primary caregivers to being coparents (Cabrera and Tamis-LeMonda 2000). In addition, I further develop theory by positing and testing the relevance of cognitive dissonance, self-consistency, and self-enhancement theories for understanding sex differences in fathering outcomes.

The current study also offers a number of methodological contributions. First, I directly assess the influence of fathering on child outcomes. A number of previous studies finding evidence of an association between fathering and children's cognitive development have instead examined shortcomings of children in father-absent families (Lamb 1997a). Second, much extant work measures father involvement in terms of time spent with children with little information on the specific content of father-child interactions. As the measures used here capture specific fathering behaviors, I am more confident that I address positive forms of father involvement rather than involvement in general. Third, whereas many previous studies utilize data on fathers provided by mothers, the ECLS-B data contain information on fathering attitudes, paternal behavior, and other factors measured directly from fathers. Finally, the ECLS-B data contain nationally representative panel data on children and their resident fathers. Heretofore, the use of small-scale convenience samples has been common in research on children's cognitive development (Bronte-Tinkew et al. 2008; Sarkadi et al. 2008). Even those few studies that have employed representative samples have generally relied on cross-

sectional data, thus providing little evidence of a causal relationship between fathering and child outcomes.

## METHODS

### *Data*

I completed analyses using data from the Early Childhood Longitudinal Study Birth Cohort (ECLS-B), a nationally representative probability sample of children born in 2001. This survey was administered by the U.S. Department of Education, National Center for Education Statistics (NCES) for the objective of describing and aiding our understanding of children's early development and experiences. A clustered list-frame design was used to select children; the sampling frame was composed of births registered with the National Center for Health Statistics vital statistics system. Children participating in the ECLS-B represent a variety of racial/ethnic and socioeconomic origins. The data contain oversamples of the following groups: Asian and Pacific Islander children, American Indian and Alaska native children, Chinese children, twins, and low birth weight children. Data collection occurred in several waves, including in 2001-02 when children were approximately 9 months old, and in 2005-06 when children were of preschool age. Data from each of these two collection periods were used.

In each wave, the initial step involved a visit to the child's home. During the home visit, a parent interview was administered, most often by the child's mother. In addition, direct child assessments were performed during the home visit. Following the home visit, a resident father questionnaire was distributed in cases where a resident father was living in the household with the sampled child. A small number of fathers responded

to the parent interview rather than the resident father questionnaire; these fathers were included in analyses. The number of completed parent interviews obtained was 10,700 at 9 months and 8,950 at the preschool collection period. The associated weighted unit response rates were 74.1% and 91.3% (National Center for Education Statistics 2008b; National Center for Education Statistics 2008c). The weighted proportion of cases with a completed parent interview at preschool, among all cases sampled at 9 months, was 63.1%. With regards to the direct child assessment, appraisals were completed for 10,200 children at wave 1 and for 8,750 children at wave 3. The corresponding weighted unit response rates were 95.6% and 98.3% (National Center for Education Statistics 2008b; National Center for Education Statistics 2008c). For the resident father questionnaires, the number of questionnaires completed was 6,300 at wave 1 and 6,100 at wave 3. The respective weighted unit response rates were 76.1% and 87.7% (National Center for Education Statistics 2008b; National Center for Education Statistics 2008c). Prior to analysis, cases missing cognitive assessments (dependent variables) or missing on all indicator variables used to create the independent latent class variable were dropped. Finally, the analysis was limited to cases where the same resident father was present at both wave 1 and 3. These decisions yielded a sample of approximately 4,650 resident father-child pairs.

### *Measures*

*Dependent Variables.* Two measures of children's cognitive abilities, literacy and mathematics overall scale scores, were used as dependent variables in analysis. These variables were measured at wave 3, when children were of preschool age. Cognitive

evaluations were conducted by trained and certified interviewers as part of the direct child assessment portion of the home visit. The literacy assessment evaluated children's skills in the following areas: recognition of letters of the alphabet, phonological awareness (comprehension of the sounds and structure of spoken language), conventions of print (understanding of practices such as the reading of English text from left to right), and word recognition. The mathematics assessment tested aspects such as children's ability to recognize shapes and numbers, count and estimate quantity, understand simple graphs and patterns, and work out basic addition statements.

An adaptive version of the direct cognitive assessment was administered to reduce respondent burden, meaning that not every child received every item. To correct for this variation in testing, Item Response Theory (IRT) modeling was used when estimating children's overall scale scores in the literacy and mathematics domains. IRT-based scores represent estimates of children's ability regarding the entire set of items in the score (Chernoff et al. 2007). As a result, the literacy and mathematics overall scale scores can be compared regardless of the actual test items a child received. The reliability coefficient is 0.81 for literacy and 0.88 for mathematics, indicating high levels of reliability. Table 4.1 presents variable definitions, means, and standard deviations for the dependent, grouping, and control variables used in analysis. A description of the independent variable, fathering profile, appears in the results below.

*Independent Variable.* Latent classes of fathering profiles, which capture both men's fathering attitudes and their father involvement, were created to serve as the independent variable. The fathering profile latent classes are comprised of a total of eighteen indicator variables, including seven that capture fathering attitudes and eleven

that assess father involvement with regards to engagement in care, engagement in play, accessibility, and responsibility. All indicators were measured during the survey's first wave, when children were 9 months old. The fathering attitudes indicators, which assess attitudes toward fathering, consist of the following statements regarding men's role as fathers:

1. It is essential for the child's well being that fathers spend time playing with their children.
2. It is difficult for men to express affectionate feelings towards babies.
3. A father should be as heavily involved as the mother in the care of the child.
4. The way a father treats his baby has long-term effects on the child.
5. The activities a father does with his children don't matter. What matters more is whether he provides for them.
6. One of the most important things a father can do for his children is to give their mother encouragement and emotional support.
7. All things considered, fatherhood is a highly rewarding experience.

For each statement, fathers indicate whether they strongly agree, agree, disagree, or strongly disagree. Dichotomous variables specifying whether a father agrees or disagrees with a given statement were used to generate the fathering profile latent classes.

The eleven indicators capturing father involvement were derived from various questions. Fathers were asked about the frequency of a number of parenting activities through the question: In the past month, how often did you do the following things with your child?

8. Play peek-a-boo with your child?
9. Do things like tickle your child, blow on his/her belly, or move his/her arms and legs around in a playful way?
10. Take your child outside for a walk or to play in the yard, a park, or a playground?
11. Change your child's diaper?



12. Prepare meals or bottles for your child?
13. Feed your child or give your child a bottle?
14. Put your child to sleep?
15. Wash or bathe your child?
16. Dress your child?

Indicators 8-10 measure fathers' engagement in play, whereas indicators 11-16 capture engagement in care. For each indicator, possible responses include more than once a day, about once a day, a few times a week, a few times a month, rarely, and not at all. Prior to analysis, a dichotomous variable of each indicator was created, signifying whether or not a father is highly involved regarding the given indicator. Engaging in a play activity more than once a day is regarded as high involvement, with the exception of outside play, for which a few times a week or more is operationalized as high involvement. Regarding the care indicators, fathers who perform the activity more than once a day are generally considered to be highly involved. However, washing or bathing a child a few times a week or more and dressing a child once a day or more are used to indicate high involvement. These cut-offs are appropriate regarding infants' needs.

The accessibility component of father involvement was assessed using a tenth indicator. Fathers were asked how often, in a typical week, they take their child along while doing errands like going to the post office, the bank, or the store. Possible responses included not at all, once or twice, 3 to 6 times, and every day.<sup>1</sup> Fathers who take along their children 3 to 6 times a week or more are considered highly accessible.

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<sup>1</sup>In the parent questionnaire, the question refers to the respondent or any other family member. This only impacts the small number of fathers (N=50) that completed the parent questionnaire rather than the father questionnaire. Responses from these fathers were included in analysis, as it is likely that these fathers, who most often are the primary or only parent, contemplate their own actions when responding to the question.

An eleventh and final dichotomous indicator was created to capture whether a father is highly involved with regards to responsibility. According to whether a portion of the child's care was provided by someone other than a parent, fathers were asked about their degree of involvement in the decision a) about the child's current child care arrangement, or b) not to use any child care. Available responses were a great deal, somewhat, and not at all. A single indicator was constructed from these two items, measuring high responsibility as a great deal of involvement in the decision to either use the current care arrangement or forego child care.<sup>2</sup>

*Grouping Variable.* Child's sex was used as a grouping variable in analysis. In accordance with ECLS-B guidelines, a composite measure indicating whether the child is male or female measured at wave 3 (with corrections for errors at previous waves) was used to capture child gender.

*Control Variables.* Various father, child, and family factors thought to be related to both fathering profiles and cognitive outcomes and captured at wave 1 were included as controls in analysis. Father characteristics controlled for include: region, class, race/ethnicity, age, father type, and religious attendance. The operational definition of geographic region consists of a set of dichotomous variables classifying region as northeast, Midwest, south, or west (northeast = reference category). An ECLS-B composite socioeconomic scale was used to assess class. The scale is constructed utilizing information on household income, education of the mother/female guardian and of the father/male guardian, and occupation of the mother/female guardian and of the father/male guardian. An assortment of dummy variables indicating quintiles on the

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<sup>2</sup>Unfortunately, the items addressing child care decision-making were not offered to fathers completing the parent interview. So as to retain this unique group of fathers for analysis, I created a third category for the responsibility indicator for those who did not receive the source items.

socioeconomic scale (first quintile = omitted group) was used in analysis. Race/ethnicity was operationalized using dichotomous variables for Hispanic, White non-Hispanic, Black non-Hispanic, Asian non-Hispanic, and other (includes non-Hispanic Native Hawaiian or Pacific Islander, non-Hispanic American Indian or Alaska Native, and non-Hispanic multiple race). In modeling, non-Hispanic Whites were used as the reference group.

Father's age at the time of the 9-month data collection was measured continuously, and father type was captured using an indicator for other father (including stepfather, foster father, and other father figure) versus birth/adoptive father. Finally, father's religious service attendance was measured using the following question: How often did you attend religious services in the past year? Possible responses include never, about once or twice, several times during the year, about once or twice a month, and nearly every week or more.

Controls were also included for the following child characteristics: age at assessment, whether a child has a special need, and previous cognitive development. One critical factor that needs to be controlled for is children's continuous age at assessment, as children's mathematics and literacy performance is sensitive to the age of testing. Whereas the ECLS-B preschool direct assessments were intended to take place when children were between 48 and 57 months of age, children were assessed when they were as young as 44 months and as old as 65 months (Chernoff et al. 2007).<sup>3</sup> Parents were asked whether a doctor had ever told them that their child had a variety of conditions, including: difficulty seeing/blindness, difficulty hearing/deafness, a cleft lip/palate, a

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<sup>3</sup>Though some children were assessed outside the ideal age range, the majority (about 75%) of children were assessed between the ages of 48 and 57 months (Chernoff et al. 2007).

heart defect, failure to thrive, problem with mobility, problem using arms/hands, Down Syndrome, Turner's Syndrome, Spina Bifida, or other special need/limitation. For analysis, a dichotomous variable was created indicating whether a child had any of these special needs. Finally, children's cognitive development at 9 months was utilized as a control. This measure serves as a control for selection or unobserved heterogeneity, by accounting for unobserved factors that influence both fathering profile and cognition in children. Cognitive development at 9 months was measured using the Bayley Short Form-Research Edition mental score (BSF-R, Flanagan and West 2004), an abridged version of the Bayley Scales of Infant Development-Second Edition (BSID-II, Bayley 1993). The BSF-R is a standardized continuous measure of mental aptitude for children from birth to 42 months of age (Flanagan and West 2004).

The following family factors were used as controls in analysis: marital status, relationship quality, maternal employment status, maternal involvement, and number of children. Couples were classified as married versus unmarried (including separated/divorced, widowed, or never married). The following question was used to assess fathers' perceived relationship quality: Would you say your relationship is...? Available responses are very happy, fairly happy, and not too happy, and the variable was reordered so that higher scores indicate greater satisfaction. The operational definition of maternal employment consists of a set of dichotomous variables indicating whether a mother is employed 35 hours or more per week (full time), employed less than 35 hours per week (part time), looking for work, or not in the labor force (omitted category = full time). An index was created to capture maternal involvement, using mothers' responses

to the question: In the past month, how often did you do the following things with your child?

1. Play peek-a-boo?
2. Do things like tickle him/her, blow on his/her belly, or move his/her arms and legs around in a playful way?
3. Take your child outside for a walk or to play in the yard, a park, or a playground?

The index, which ranges from 0 to 3, indicates the number of items the mother is highly involved on. These items match indicators 8-10 for fathering profile, and high involvement was operationalized here as for the fathering indicators.<sup>4</sup> Finally, a continuous measure of the number of household members under the age of 18 was used to control for number of children.

### *Method of Analysis*

In the first stage of analysis, I investigated resident fathers' fathering profiles using latent class analysis (LCA). In LCA, an assortment of observed categorical indicators is used to classify a set of discrete, mutually exclusive latent classes of individuals (Lanza et al. 2007). The eighteen indicators described above were used to construct the latent classes. I generated an array of base latent class models with varying numbers of classes, and chose a prime model by inspecting the following criteria: the likelihood-ratio  $G^2$  statistic, Akaike's Information Criterion (AIC; Akaike 1974), and Bayesian Information Criterion (BIC; Schwartz 1978). Two sets of parameters were

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<sup>4</sup>Unfortunately, several of the parenting questions administered to fathers were not also asked of mothers. Other parenting questions received by mothers refer to the activities of any family member, and thus are not strict measures of maternal involvement. Thus, only mothers' engagement in play is assessed by the measure of maternal involvement. However, since maternal involvement serves as a control in analysis and is not a primary focus for this study, this measure of a single dimension of maternal involvement suffices. Because maternal involvement was used as a control, as well as for ease of modeling, maternal involvement was operationalized using an index rather than a set of latent classes.

estimated for the selected model: class membership probabilities ( $\gamma$  (gamma) parameters) and item-response probabilities contingent on class membership ( $\rho$  (rho) parameters). The distribution of respondents across the latent classes is denoted by the  $\gamma$  parameters, whereas the  $\rho$  parameters indicate the correspondence between the observed indicators and the latent classes. The  $\rho$  parameters range from 0 to 1, with values nearer to 1 indicating greater congruence between a specified indicator response and membership in a given latent class.

To use the fathering profiles as independent variables for regression analysis, I computed each father's probability of membership in each of the latent classes using Bayes's theorem (Lanza et al. 2007). I then applied the rule of maximum-probability assignment, assigning respondents to the class for which they have the highest probability of membership (Nagin 2005). A set of dichotomous variables indicating the assigned class was used in analysis.

For the second stage of the study, I evaluated the influence of fathering profile upon preschoolers' literacy and mathematics abilities through the use of ordinary least squares (OLS) regression, with all analyses weighted. OLS regression is appropriate for the application, as both dependent variables consist of continuous quantitative measures of cognitive development. In OLS, results are interpreted in terms of the variable coefficients. For continuous variables, the coefficient estimates the change in overall literacy or mathematics score associated with a unit increase in the independent or control variable. Positive coefficients suggest that a given variable is related to an increase in children's cognitive development, whereas negative coefficients indicate a given variable predicts a decrease in cognitive ability. For categorical variables, the coefficient indicates

how much higher (if positive) or lower (if negative) the value of cognitive development is for the specified category relative to the reference category.

Regression analyses proceeded, separately for each dependent variable, as follows: The impact of fathering profile on children's cognitive development, controlling only for previous cognitive development, is assessed in Model 1. Model 2 estimates the relationship between fathering profile and children's cognition accounting for all controls.<sup>5</sup> Models were run separately for girls and boys. For each model, I conducted an F-test assessing the significance of all gender interaction terms. Each test was significant ( $p < .001$ ), indicating that sex-separate modeling is appropriate.

## RESULTS

### *Latent Classes of Fathering Profile*

Table 4.2 contains the instruments used to select the optimal model of latent classes, including the likelihood-ratio  $G^2$  statistic, AIC, and BIC. Models with two through seven classes were assessed using these criteria. If there is a noteworthy decrease in each of these criteria when proceeding from a model with  $C$  classes to one with  $C + 1$  classes, the model with greater classes has an improved fit. We see that each of the instruments grows smaller when proceeding from the two-class through the six-class model, denoting better fit with each added class. In contrast, the value of the BIC increases somewhat when progressing to the seven-class model, indicating that American resident fathers are best described by six classes of fathering profile.

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<sup>5</sup>In preliminary analysis, I added controls to the model in steps due to concerns that some of the controls could be endogenous to the model (e.g., a mother could withdraw from the work force to invest more time in her child if the child's cognitive development is delayed). However, the results for fathering profile are stable overall when adding controls by steps. For this reason, and to conserve space, I present only the first and full models here.

Table 4.3 contains the  $\gamma$  and  $\rho$  parameters—which respectively indicate the classes’ relative size and traits—for the six-class model. As explained in detail below, I have labeled these classes as follows: *adaptive involved attitudes, sideline behavior* (AIS); *adaptive involved attitudes, somewhat involved behavior* (AISI); *involved attitudes, responsibility-focused behavior* (IRF); *involved attitudes, considerably involved behavior* (ICI); *involved attitudes, reluctant caregiving behavior* (IRC); and *involved attitudes, highly involved behavior* (IHI). The largest group, comprising just over one-quarter of fathers, contains those who possess the IHI profile. The ICI, IRC, and IRF classes follow closely behind, each encompassing about 18-20% of fathers. Approximately 14% of men fit the AIS profile. The rarest class, the AISI profile, comprises about 3% of resident fathers—a modest but still noteworthy proportion.

The traits of the various profile classes are spelled out in the  $\rho$  parameters, or item-response probabilities, which are also contained in Table 4.3. These parameters additionally demonstrate the appropriateness of the labels assigned to the classes. Varying from 0 to 1, they indicate the likelihood of giving a particular response to an item given membership in a specified class. For the attitudinal indicators, the focal response is agreement. For the behavioral indicators, the category of interest is highly involved or, for the responsibility indicator only, not asked. For example, the likelihood that fathers with the AIS profile agree that fathers must play with children is 0.99, and the probability that these men are highly involved with children regarding tickling is about 0.33.

I now review the characteristics of the various classes, focusing first on the attitudinal items and secondly on the behavioral items. Going left to right in Table 4.3,



the classes are approximately ordered from low to high. That is, classes further to the right generally are more likely to endorse involved fathering and/or demonstrate higher levels of paternal involvement. The reader may wish to consult Table 4.4, which provides a summary of the classes' key traits, throughout this review.

With regards to attitudes, there is some degree of similarity across classes. Each of the six classes has a very high probability of agreeing with the following items: father must play with child, father's treatment has long-term effects, important for father to encourage mother, and fatherhood highly rewarding. Thus, all fathers value involved fathering to some extent. However, fathering profiles can be distinguished from one another based on men's views regarding equal involvement between fathers and mothers, the difficulty of being affectionate toward young children, and the relative importance of financial provision versus engaging in activities with children. For these remaining indicators, those classes labeled as having involved attitudes—IRF, ICI, IRC, and IHI—provide answers consistent with the expectations of the highly involved father role. Men in each of these groups are very likely ( $p > 0.85$ ) to agree that fathers should be as involved in childrearing as mothers. In contrast, members of these classes have a very low probability ( $p < 0.15$ ) of agreeing that men have difficulties expressing affection toward babies or that provision trumps activities with children.

Classes labeled as having adaptive involved attitudes—AIS and AISI—have a different response pattern for these key attitudinal items. The AIS fathers and, to a greater degree, the AISI fathers are somewhat more likely than other classes to believe that men have difficulty expressing affection. Further, members of these groups are more likely than others to emphasize provision over activities with children. For AISI fathers, this

probability is especially high ( $\rho > 0.9$ ). Finally, AIS fathers are somewhat less likely ( $0.7 < \rho < 0.8$ ) than all other men, including AISI fathers, to support equal involvement between men and women in childrearing. Thus, although AIS and AISI fathers tend to support many tenets of the highly involved father role, they adapt involved fathering to include some hesitance regarding affection and accentuation on provision. These adaptations are stronger for AISI men.

Let us now review the behavioral characteristics of the different classes, directing attention to the probability of high involvement on four aspects of paternal involvement—engagement in play, engagement in care, accessibility, and responsibility. Looking first at the adaptive involved attitudes, sideline behavior (AIS) profile, we see that these men's actions are fairly consistent with their attitudes. That is, their lower likelihood of favoring equal involvement and somewhat stronger emphasis on provision are paired with lower levels of involvement. Although AIS fathers are considerably involved in the area of responsibility—they are moderately likely ( $0.6 < \rho < 0.7$ ) to take high responsibility for child care decisions, on all other dimensions of parenting their participation is low. AIS fathers' lower engagement in play is reflected in their very low probability ( $\rho < 0.1$ ) of high involvement on playing peek-a-boo, and in their moderately low probabilities ( $0.2 < \rho < 0.4$ ) regarding tickling and outside play. They have a very low likelihood ( $\rho < 0.1$ ) of being highly engaged in most care tasks (changing diapers, meal/bottle preparation, feeding, putting children to sleep, and dressing), and only a slightly higher probability of being highly engaged in bathing. These men's accessibility to their children, as evidenced by the item on taking one's child on errands, is also low ( $\rho = 0.2$ ).

On the other side of the continuum is another group whose behavior conforms closely to their fathering attitudes. Consistent with their valuation of engaged fathering, men in the involved attitudes, highly involved behavior (IHI) class are highly involved in all aspects of fathering. IHI fathers show a very high likelihood ( $\rho > 0.85$ ) of engaging extensively in tickling and outdoor play with children, as well as for each care activity excepting putting one's child to sleep. Their probabilities of high engagement in playing peek-a-boo ( $\rho = 0.66$ ) and putting children to sleep ( $\rho = 0.72$ ) are only slightly lower. Lastly, IHI fathers are very likely ( $\rho > 0.7$ ) to be accessible to and responsible for their infants.

For the remaining fathering profiles, there is less congruence between fathering attitudes and involvement. Looking at the adaptive involved attitudes, somewhat involved behavior (AISI) profile, we see that although they are even more likely than their AIS counterparts to be hesitant in bestowing affection and to emphasize provision, their levels of involvement are nonetheless higher in general. They are considerably engaged in play, indicated by a high probability ( $\rho > 0.7$ ) of extensive participation in tickling and outdoor play and moderate likelihood ( $0.3 < \rho < 0.4$ ) of high engagement in peek-a-boo. Although their probability of high involvement in the different care tasks varies substantially ( $0.2 < \rho < 0.7$ ), AISI fathers are consistently more caring than those with the AIS profile. Further, AISI men demonstrate considerable levels ( $0.5 < \rho < 0.6$ ) of accessibility. However, their probability of being greatly responsible for child care decisions, though substantial ( $0.4 < \rho < 0.5$ ), is lower compared to all other profiles.

Despite their endorsement of highly involved fathering, the remaining profiles demonstrate lower levels of involvement than IHI fathers on one or more dimension of

parenting. Although members of the involved attitudes, responsibility-focused (IRF) class are—as their name suggests—highly responsible ( $\rho > 0.7$ ) for their young children, they are engaged in care to about the same degree as AIS fathers. In addition, IRF fathers are less accessible ( $\rho = 0.34$ ) than other involved attitudes profiles and even AISI fathers. They are also less engaged in outdoor play and peek-a-boo relative to IHI fathers, although those with the IRF profile have a very high likelihood ( $\rho > 0.9$ ) of extensive engagement in tickling.

Upon examining the involved attitudes, considerably involved (ICI) behavior class we first see that they engage in play at a similar level as their IRF counterparts. Their responsibility for children is also comparable. However, they are somewhat more likely ( $0.3 < \rho < 0.45$ ) to be highly accessible to children, and care considerably for children. ICI fathers are moderately likely ( $0.3 < \rho < 0.5$ ) to be highly involved in children's bathing, dressing, and bedtime routines, and still more engaged in diapering and mealtime activities.

The final profile, which also is lacking somewhat in consistency between attitudes and behavior, is the involved attitudes, reluctant caregiving behavior (IRC) profile. The label-earning characteristic of this group is these men's mixed administration of care. Despite being more involved in changing diapers and especially bathing children, IRC fathers have a low likelihood ( $\rho < 0.2$ ) of high involvement in all other care activities. In other respects, these men exhibit substantial involvement. Members of the IRC class are highly likely ( $\rho > 0.7$ ) to take responsibility for child care decisions, and are considerably accessible ( $0.5 < \rho < 0.6$ ) to their children. Their engagement in play, though variable ( $0.3 < \rho < 0.9$ ), is also of a noteworthy level.

### *Influence of Fathering Profile on Child Cognition*

*Literacy.* Table 4.5 displays results from the sex-separate regression of children's literacy scores on fathering profile and control variables. For the regression models, I use the AIS fathers as the reference class, as they both endorse a less-involved form of fathering and exhibit low levels of paternal involvement. However, I also note in the table significant differences that arise when using an alternate profile as the reference category. In the discussion that follows, I interpret results that are significant at or below the .05 level (two-tailed tests).

Model 1 examines the relationship between fathering profile and literacy score, controlling only for previous cognitive development. There is evidence that one's fathering profile is significantly related to his child's level of literacy, although the association differs by child's gender. An inconsistent fathering profile appears to be problematic for girls, such that girls with AISI fathers have about a 2.73-point lower literacy score than those with AIS fathers. As noted in the table, these girls are also disadvantaged compared to all other fathering profiles. None of the other profiles, relative to the AIS class, is more or less beneficial for girls' literacy attainment. For boys, however, fathering profiles with a greater focus on involvement are associated with a literacy premium. Compared to boys with AIS fathers, those with ICI or IRC fathers score 1.5-1.8 points higher on literacy. Contrary to expectations, sons with ICI or IRC dads also fare better than their counterparts with IHI fathers. Thus, the greater incongruence found in the ICI and IRC profiles relative to the IHI class seems to be beneficial for boys. For both daughters and sons, previous cognitive development is positively associated with literacy score.

Model 2 assesses the relationship between fathering profile and literacy when accounting for father, child, and family characteristics in addition to previous cognitive development. Once more, it appears that fathering profiles featuring incongruence between attitudes and behavior are disadvantageous for girls and advantageous for boys. Compared to girls with AIS fathers, those whose dads fit the ICI profile score about 1.2 points lower on literacy. For boys, the positive relationship between ICI fathering and literacy is robust. Again, these sons have higher literacy in comparison with those who have IHI fathers as well as those with AIS dads. AISI fathering is also found to be beneficial for boys, such that boys with AISI dads score about 2.4 points higher on literacy than those with AIS fathers. As noted in the table, these boys also fare better in comparison to those with IRF or IHI dads. The positive relationship between literacy score and previous cognitive development remains significant, although it decreases somewhat in magnitude.

A further look at Model 2 reveals that father, child, and family characteristics are relevant for literacy cognition in preschool-aged children. With regards to father characteristics, residence in the West is related to somewhat lower literacy in girls, and greater socioeconomic status boosts cognition in both boys and girls. Relative to White non-Hispanics, children of Hispanic fathers fare slightly worse whereas those with Black or Asian dads fare better. Girls, but not boys, benefit when fathers delay childrearing and are adversely affected by a non-birth/adoptive father. Having a more devout father increases literacy score slightly, but only for boys. Turning to child characteristics, we see that—as expected—children who were older at the time of assessment scored better. Girls identified as having a special need have somewhat higher literacy scores. As for

family traits, boys whose mothers work part-time rather than full-time fare slightly better. Maternal involvement is related to higher literacy in both daughters and sons, whereas a higher number of children in the household reduces cognition.

*Math.* Results from sex-separate regression of preschoolers' math score are presented in Table 4.6. Model 1 evaluates the relationship between fathering profile and math score controlling for previous cognitive development. Once more, this relationship is different for daughters and sons. As was observed for literacy, the less congruent AISI profile is negatively related to girls' math scores. Compared to daughters with AIS fathers, those whose fathers fit the AISI profile score about 2.7 points lower on math. These girls are disadvantaged relative to all other fathering profiles as well. However, another profile characterized by some deviation between fathering attitudes and involvement—the IRF profile—is associated with higher math scores for girls. Girls with IRF dads, compared to their counterparts with AIS fathers, have about a 1.2-point higher math score. As indicated in the table, these girls outperform those with any other type of father. Again, there is evidence that fathering attitude-behavior inconsistency is beneficial for boys. Sons with IRC fathers score about 1.2 points higher on math cognition than those with AIS fathers. These boys are also advantaged relative to those whose fathers fit the IHI profile. As for literacy, previous cognitive development is positively related to girls' and boys' math scores.

The association between fathering profile and math score when adjusting for father, child, and family traits as well as previous cognitive development is examined in Model 2. As in Model 1, divergence between fathering attitudes and behavior seem to negatively affect girls. As was observed for literacy, having an ICI father is

disadvantageous for girls, such that daughters with ICI fathers score about 1 point lower on math than those with AIS dads. However, once additional controls are added, boys' math scores no longer benefit from having a father fitting the IRC profile. Indeed, in the full model, none of the other profiles is more or less salutary for boys' math attainment. The positive association between previous cognitive development and math score retains significance for boys, although it declines in size.

Model 2 additionally assesses the influence of various control factors on children's math scores. Looking at father characteristics, we see that residence in each region other than the Northeast is associated with lower math cognition in girls, and living in the South negatively impacts math acquisition in both boys and girls. As was seen for literacy, higher socioeconomic status raises math scores. Once more, children with Hispanic fathers have somewhat lower scores than White non-Hispanics, whereas children of Asian fathers fare better. Again, having an older dad is positively associated with daughters' math cognition, and girls with non-birth/adoptive fathers achieve lower scores than those with birth/adoptive fathers. Similar to findings for literacy, boys' but not girls' math attainment increase somewhat when dads attend religious services more frequently. With regards to child traits, preschoolers who were older at the time of assessment earned higher scores. Family characteristics appear to be of little consequence for children's math cognition, with the exception of number of children. Both boys and girls attain lower scores when an additional child is present in the household.



## DISCUSSION AND CONCLUSION

A growing body of evidence suggests that fathers' provision of economic support and engagement with children promotes children's socioemotional and cognitive development (e.g., Bronte-Tinkew et al. 2008; Lamb 1997a; Pleck and Masciadrelli 2004). However, there remains a need to examine the degree to which fathering attitudes as well as involvement influence child well-being. Evidence suggests that there is incongruence between men's fathering attitudes and parenting practices (see, for example, Bronte-Tinkew et al. 2008). It may be that the level of consistency between paternal attitudes and involvement is relevant for child outcomes. Here, I use nationally representative panel data to investigate the relevance of resident fathers' fathering profiles—which encompass both their paternal attitudes and behavior—for young children's literacy and math abilities. I further examine whether fathering profiles influence sons and daughters in distinct ways.

Results indicate that combinations of fathering attitudes and behavior are not straightforward. Rather, for a given fathering attitude—whether it be the valuation of involved fathering or adaptive involved fathering, more than one pattern of behavior is common. Thus, as has been found for other aspects of family life (Deutsch 1999; Franco, Sabattini, and Crosby 2004), there is some inconsistency between men's fathering attitudes and actual involvement.

Consistent with previous research (e.g., Pleck and Masciadrelli 2004), I find evidence that American resident fathers' involvement lags behind fathering attitudes. Although the largest group endorsing high involvement also exhibits highly involved behavior, there are three classes who hold these attitudes but whose behavior does not

measure up on all dimensions of fathering—engagement in play, engagement in care, accessibility, and responsibility. Indeed, taking these three groups into account, fathers who value highly involved fathering but do not practice it outnumber those who both endorse and engage in this way of fathering. In addition, where there is inconsistency between paternal attitudes and behavior, fathers' actions generally fall short of their attitudes. Fathers who are more involved with children than would be expected given their great emphasis on provision (AISI fathers) comprise a small group.

I also find that the relationship between one's fathering profile and his child's literacy and math abilities differs for girls versus boys. As has been found in previous studies (Furstenberg and Weiss 2000; Lamb 1981), my results suggest that men's fathering provides greater benefits for sons than for daughters. With regards to both literacy and math, girls' cognition is negatively impacted when fathers endorse highly engaged fathering but are only considerably involved with their child. In contrast, profiles characterized by incongruence are advantageous for sons' literacy. This is true both for fathers whose involvement exceeds expectations (AISI fathers) as well as for those whose behavior falls short of their fathering attitudes (ICI fathers). However, I find little evidence of this positive effect for math ability in boys.

These findings suggest that, as expected, fathers react differently to dissonance between attitudes and behavior when parenting a daughter versus a son. Cognitive dissonance and self-consistency theories are useful for understanding the consequence of incongruence between fathering attitudes and behavior for girls' cognition. That is, fathers of daughters likely experience distress and lower self-confidence in response to dissonance, which in turn inhibit effective parenting (Halme et al. 2006; Magill-Evans

and Harrison 2001). On the other hand, compensatory self-enhancement theory helps explain the relationship between fathering profile and boys' literacy. In particular, fathers with sons may react to dissonance by inflating their self-image, which encourages positive fathering (Almeida, Wethington, and McDonald 2001). Fathers of sons likely compensate for inconsistencies because they believe that they serve as important role models for their sons and/or can rely on shared interests with their male offspring.

Contrary to expectations, I did not find that cognitive outcomes were best for children whose fathers both endorsed highly involved fathering and demonstrated high involvement on all aspects of fathering. This conflicts with previous research finding a positive relationship between father involvement and children's cognition (e.g., Flouri and Buchanan 2004; Shannon et al. 2002). It may be that congruency between attitudes and behavior is at least as important as—if not more so—levels of paternal involvement for cognitive development.

Although the current study enhances our understanding of the relevance of fathers for children's cognitive development, it is not without shortcomings. A noteworthy limitation is that I do not directly examine the mechanisms by which fathering profiles impact learning in young children. A more robust test would assess whether the relationship between fathering profile and cognition attenuates when accounting for men's levels of distress and self-image. Consequently, the conclusions I make with regards to cognitive dissonance, self-consistency, and self-enhancement theories are tentative.

A second concern is that the data used here are not representative of all resident fathers, but instead are selective of some subgroup of fathers. This could occur because

the ECLS-B data were collected with the aim to represent children born in 2001, rather than resident fathers. It is likely that the sample used here differs from the general population of resident fathers in two ways. First, it may underrepresent nonbiological fathers, whom children are more likely to have at older ages. Additionally, some fathers are lost over time as they move out of the child's household following the break-up of the parental relationship. Due to these differences, these data may be biased toward the selection of fathers who are more involved in interactions with children. This likely occurs because father involvement is generally lower for resident nonbiological fathers (Harris and Ryan 2004) and nonresident biological fathers (Carlson 2006), compared to resident biological fathers. This would result in some overestimation of the more involved fathering profiles. Be that as it may, inferences about the relationship between fathering profile and child cognition are less likely to be affected.

Notwithstanding the contributions this study adds to our store of knowledge on fathering, more research on this topic is necessary. One area of interest is the relevance of fathering profiles for additional outcomes. Potential topics include children's psychological well-being, the stability and quality of parental relationships, and fathers' life satisfaction. In addition, I echo Mitchell et al.'s (2009) call for qualitative research on the meaning and nature of father-child relations. That the same fathering profile is associated with substantially different results for sons versus daughters suggests that there are qualitative differences in the ways fathers interact with girls and boys. Available survey measures fail to capture these dissimilarities.

To summarize, I find that when fathers are less involved than they wish to be, the consequences for girls are problematic. Thus, it is important to enable men who value

highly involved fathering to increase their involvement with their children. The ensuing increase in attitude-behavior congruence would likely benefit girls. Alternatively, messages that fathers serve as important role models for girls as well as boys should be reaffirmed, and shared interests between fathers and daughters should be more encouraged. This process has already begun, as girls are increasingly participating in activities similar to those of boys (Hofferth and Sandberg 2001). As long as sons reap greater advantages from interactions with fathers than daughters, boys will remain more privileged relative to girls.

## **CHAPTER 5**

### **CONCLUSION**

Over the last thirty years, the nature and significance of fatherhood has received greater attention from both social scientists and policymakers. In sociology and related disciplines, a greater number of scholars have pursued the study of fatherhood, and efforts to encourage study in the area have also grown (Marsiglio et al. 2000). This has led to the growth of the number of publications on fathering (Goldberg, Tan, and Thorsen 2009). This body of work addresses a variety of topics including cultural depictions of fatherhood, descriptions of men's parenting and factors related to it, and the relevance of fathers for child well-being (Lamb and Tamis-LeMonda 2004; Marsiglio et al. 2000).

This increased focus on fathering has arisen due to a greater appreciation of the significance of fathers in their children's lives. Due to this greater attention to fathering, social scientists now generally agree that positive father-child interactions are desirable (Lamb 2004). Involved fathering has been found to promote better outcomes in children (Pleck and Masciadrelli 2004), marital satisfaction (Lamb 2002), and personal growth and development in men themselves (Coltrane 1996).

Despite these advances in fatherhood research, gaps remain in our understanding of men's parenting. First, social scientists remain perplexed by findings that men continue to be less than full coparents with women. Second, when defining fathering, researchers have tended to focus on societal expectations rather than how fathers

themselves think of their parenting. Indeed, paternal involvement has generally been judged in relation to mother-child interactions as opposed to fathers' desired ways of parenting. Finally, more information is needed on how fathering is shaped by the larger social structure. Key structural factors to consider include the nature of men's employment and social support networks. One shortcoming, for example, is the perception of work-family conflict solely as a "woman's issue (Spain and Bianchi 1996)." This view is common both in the research literature and in American culture, and leads us to overlook the possible importance of work-family balance for men and their families.

In this dissertation, I synthesize the study of fathering attitudes, paternal involvement, and child development in three interconnected research chapters. These topics are examined using nationally representative data on children and their resident fathers from the Early Childhood Longitudinal Study Birth Cohort (ECLS-B). I bring in more of a focus on resident fathers' attitudes regarding fathering, as well as how structural factors relate to father-child interactions. In the first substantive chapter, Chapter 2, I describe men's expectations for themselves as fathers, assessing the usefulness of the provider father-involved father typology for understanding observed fathering attitudes. Further, I explore similarities and differences in fathering ideology by race/ethnicity and class. Chapter 3 examines the relationship between resident fathers' fathering attitudes and their involvement on multiple dimensions of parenting—engagement in play, engagement in care, accessibility, and responsibility. Here, I also test how structural factors—including employment characteristics, social support, and fathering examples—affect this relationship. In the final substantive chapter, Chapter 4, I

investigate the relevance of men's fathering profiles—comprised of both their fathering attitudes and involvement—for literacy and math cognition in preschool-aged children. In addition, I assess whether fathering profiles impact sons and daughters in ways that are more similar or different.

## SUMMARY OF FINDINGS

### *American Fathers' Fathering Attitudes*

Results from Chapter 2 suggest that the great majority of fathers endorses the highly involved father role. These men desire to 'be there' for their children in multiple ways, including as a playmate, an affectionate attachment figure, and a parent who engages in activities with children as well as financially supports them. They are also child-centered, as they find fathering to be rewarding and important for child well-being. This is consistent with previous research finding that fathers greatly esteem their roles as fathers (Lamb and Sagi 1983; Pleck 1983). Finally, those who value engaged fathering believe that men should both indirectly and directly support children, and endorse equal sharing of childrearing between mothers and fathers.

I find also that the conventional provider father-involved father typology is inadequate for understanding observed fathering attitudes, in keeping with some previous findings (Coltrane 1996; Wilcox 2004). As evidence for this, more than two classes are required to portray men's attitudes. Further, whereas some fathers place somewhat of an emphasis on their role as financial providers, these same fathers also support many aspects of involved fathering.



When looking at group variation in fathering attitudes, I find both similarities and differences by race/ethnicity and social class. Attitudes are similar in that, in each racial/ethnic group and class category, the modal latent class was those advocating the highly involved father role. However, the pattern of adaptive involved fathering—endorsing many aspects of involved fathering while maintaining some emotional distance and emphasis on provision—is evident only among minority fathers. Cultural differences are also of importance, as a small but noteworthy group of Hispanic fathers appear to be influenced by machismo and familism. With regards to class, a greater proportion of non-professional fathers, compared to their professional counterparts, support involved fathering. This is congruent with past research finding a positive association between social class and involved fatherhood (Darling-Fisher and Tiedje 1990).

### *Influence of Fathering Attitudes on Father Involvement*

In Chapter 3, I find that men's interactions with children fall short of their expectations for themselves as fathers. Whereas a large proportion of men endorse involved fathering, substantially fewer fathers are highly involved with children on all dimensions of fathering—engagement in play, engagement in care, accessibility, and responsibility. This result compliments findings from prior studies that men's childrearing practices are not in keeping with the highly involved father ideal (e.g., Dienhart 2001; McMahon 1995). Still, despite this discrepancy, men's fathering attitudes are related to their fathering behavior.

Also of importance, I discern evidence that fathers experience work-family conflict. Fathers who are out of the work force or work part-time are more likely to be

highly involved on all aspects of fathering, whereas those who work full-time plus tend to limit their involvement to one or two dimensions of parenting. Further, the availability of a variety of job benefits—including sick leave, child care assistance, and flexibility—promotes father-child interaction. Consistent with past scholarship (Coltrane 1996), I additionally find that working a non-day shift—particularly the night shift—is related to greater engagement of fathers in caring for children.

Unlike employment factors, the social support and fathering examples fathers receive do not appear to be in direct conflict with their fathering attitudes. Nonetheless, these structural factors are relevant for paternal involvement. High levels of social support promote more engaged patterns of involvement, whether this support is received from a spouse/partner or other source. In addition, my research corroborates Bronte-Tinkew et al.'s (2009) suggestion that children's mothers play a central role in fostering father-child interactions. When investigating fathering examples, I find that the presence of a male role model in and of itself does not encourage highly involved fathering. Experience with a positive fathering role model—meaning a father's parenting is guided by that example—is necessary.

#### *Influence of Combination of Attitudes and Involvement on Child Cognition*

Results from Chapter 4 suggest the presence of some discrepancies between men's fathering attitudes and parenting behavior. This is unsurprising, as inconsistencies have been found for other aspects of family life (Deutsch 1999; Franco, Sabattini, and Crosby 2004). When describing fathering profiles, I find that more than one involvement pattern is paired with a specified fathering attitude. Where inconsistencies between

attitudes and behavior occur, father-child interactions typically lag behind men's paternal attitudes.

Evidence suggests that fathering profiles relate to sons' and daughters' cognitive development in distinct ways. I find that men's parenting offers greater benefits for boys than for girls, consistent with prior scholarship (Furstenberg and Weiss 2000; Lamb 1981). When fathers value highly involved fathering but are only considerably involved with their child, the consequences for girls' literacy and math attainment are unfavorable. In contrast, fathering profiles featuring inconsistency between attitudes and behavior are associated with higher literacy for boys. It may be that fathers with daughters react to attitudinal-behavioral dissonance with higher levels of distress and/or lower self-confidence, whereas fathers of boys respond to this incongruence with inflated self-image. These opposing reactions likely generate different outcomes in children via qualitatively distinct forms of fathering.

I did not find, as I expected, that children's cognitive development was highest in cases where fathers' valuation of highly engaged fathering was paired with high involvement on all dimensions of parenting. This result is in contrast with extant research discerning a positive association between father-child interaction and child cognition (e.g., Flouri and Buchanan 2004; Shannon et al. 2002). It appears that attitudinal-behavioral consistency with regards to fathering is as important, or perhaps more so, for intellectual development as levels of father involvement.

## STUDY LIMITATIONS AND FUTURE RESEARCH

Although the current work enhances our understanding of fatherhood, it is not without shortcomings. One limitation is that the findings reported here may not be strictly generalizable to all resident fathers. The ECLS-B sample was selected with attention to a focal child, rather than with the aim to generate a representative sample of resident fathers. In particular, the sample likely has a lower proportion of stepfathers and other father figures, as these men often enter the picture when children are of an older age. In addition, when using the panel data, some fathers are lost over time as they leave the child's household. Together, these factors make it likely that the sample of fathers used here are somewhat more involved in childrearing than fathers in the general population. This is likely for two reasons. First, among resident fathers, biological fathers tend to be more engaged than nonbiological fathers (Harris and Ryan 2004). Second, father involvement is lower for nonresident biological fathers than for those residing with children (Carlson 2006). If the ECLS-B fathers are somewhat more involved than those in the larger population, some overestimation of fathering is likely. This possibility is more of a concern for the finding that fathers largely endorse involved fathering. However, it is less of a concern with regards to my evidence that shortcomings in paternal involvement remain.

A second concern for the results reported here is the potential for social desirability bias. Fathers may overreport their acceptance of various tenets of highly involved fathering and/or their interactions with children. This possibility is more of a concern for descriptions of fathering than for inferences about the relationships between fathering attitudes and involvement or between fathering and child development. That is,

social desirability bias could lead to an overestimate of the proportion of fathers who favor highly involved fathering. However, it is unlikely that men would overreport their attitudes endorsing highly involved fathering considerably more than their involvement. For this reason, it is unlikely that social desirability bias can explain away my findings of inconsistencies between fathering attitudes and behaviors.

A third concern is the possibility of endogeneity in Chapters 3 and 4. The analyses in these chapters assume that all the right-hand side variables are truly exogenous (see Figures 3.1 and 4.1). If this turns out not to be the case—for example, fathers who desire to be heavily involved in raising their children may choose jobs/careers that ease the combination of an active fathering role and paid work obligations, then the resulting coefficients may be biased. Although the decision to measure the independent and control variables in waves previous to when the dependent variables were captured reduces this possibility somewhat, it does not eradicate it.

A few additional shortcomings arise. One issue is that my description of fathering attitudes and group variation in them in Chapter 2 does not control for various factors that may influence paternal attitudes. Potential items to control for include men's personal and employment characteristics, child traits, and information on men's spouses/partners and family life. An area where this is concern arises is for my somewhat similar findings for the race-separate and class-separate modeling. I do not control for class when looking at group differences by race/ethnicity, nor account for race/ethnicity when examining attitudes by class. For this reason, I cannot conclusively say that group differences in attitudes are due to race/ethnicity or social class. In the future, I plan to assess how a

variety of factors relate to men's fathering attitudes, and to specifically parcel out the relevance of race/ethnicity versus social class.

The survey measures of fathering behavior used here present another limitation. Although they are useful, they may fail to capture subtle yet important qualitative differences in fathering. More detailed measures may be needed to further illuminate some of the results reported here, particularly the disparate impact of fathering profile for daughters versus sons. The collection of qualitative data, especially from participant observation of fathers interactions with girls compared to boys, may be useful for creating more detailed measures of fathering.

Finally, in Chapter 4, I do not directly test the mechanisms by which fathering profiles influence children's cognitive development. That is, I do not include measures of fathers' distress, confidence, or self-image. Consequently, I cannot decisively evaluate the relevance of cognitive dissonance, self-consistency, and self-enhancement theories. I plan to address these questions in future research. The strength of the chapter as it stands is presenting for the first time, to my knowledge, the total relationship between a set of fathering profiles and young children's cognitive development.

A number of topics relating to fathering remain for future research. A key area of interest is the fathering attitudes and involvement of nonresident fathers. This growing group merits special attention. Because these fathers have additional and unique barriers to interacting with children relative to resident fathers, a separate investigation of their fathering ideology and practices is needed. Also required is the qualitative study of father-child interactions, especially a comparison of engagement with daughters versus sons. As emphasized by Mitchell et al. (2009), the nature of father-child interaction rather

than mere contact is important for child outcomes. Participant observation would be an especially useful method for this purpose, as it would provide detailed information on paternal engagement. In addition, the use of a less partial observer, as opposed to men's self-reporting of involvement, would substantially reduce the possibility of social desirability bias.

Future research should also investigate factors that help shape fathering attitudes, as well as stability or change in these attitudes over time. Potentially relevant items include fathers' personal characteristics, traits of fathers' wives and partners, and the nature of social support received from others. Work-family conflict among fathers also merits more investigation. One area to examine is the consequences of such conflict for children, families, and fathers themselves. Research on whether and/or how men's experience of work-family conflict differs from that of women is also needed. Finally, future scholarship should assess the relevance of fathering profiles for outcomes other than cognitive development. Consequences of interest include children's psychological well-being and social skills, fathers' life satisfaction, and the stability and quality of parental relationships.

## STUDY CONTRIBUTIONS AND IMPLICATIONS

This body of work exhibits a number of strengths and makes both theoretical and methodological contributions to the study of fatherhood. The use of latent class analysis (LCA) presents one theoretical and methodological advance. This procedure provides a more inductive approach to understanding fathering. It is an improvement over the conceptualization and application of ideal types, where researchers construct types of

fathers prior to analysis and try to fit the data to them. Further, whereas past approaches often have simply operationalized traits from low to high or used some average value, LCA allows unique combinations of characteristics. Because social actors are complex, a number of social identities and classifications demonstrate some degree of ambiguity or inconsistency. Thus, LCA may be useful for studying other aspects of families as well as in other areas of specialization.

Another strength lies in my conceptualization of father involvement. In addition to considering multiple dimensions of fathering—engagement, accessibility, and responsibility, I refine the definition of father involvement by distinguishing between engagement in care and play. Also important, I further develop theory on how fathers uniquely support child development through an innovative application of cognitive dissonance, self-consistency, and self-enhancement theories. Cabrera (2000) has suggested that, as more fathers become coparents, social scientists should develop a greater focus on fathers' distinct impact on children.

My dissertation research also offers a number of methodological contributions. One such strength is the use of the ECLS-B data, which consists of a nationally representative sample of children and their resident fathers. This is an improvement over previous studies relying on information on White middle-class fathers (Bronte-Tinkew et al. 2008). In addition, I take advantage of the study's longitudinal data collection in Chapters 3 and 4.

Another asset of the current study is the use of data collected directly from fathers, as opposed to reliance on mothers' reports of fathering. Indeed, the validity of such proxy reports has been questioned (Cherlin and Griffith 1998). Finally, I make use



of information on men's specific fathering attitudes, rather than broader gender ideology or the general value men place on their roles as fathers. This is important because attitudes focused on a particular behavior are more useful for understanding that behavior than more general attitudes (Ajzen and Fishbein 1977).

The research reported here is especially relevant for policymakers and those who support a more equal sharing of parenting responsibilities between mothers and fathers. That American fathers largely support the involved father role suggests that rewards associated with this way of fathering—including advantages for children and more satisfying lives for men (Marsiglio et al. 2000; Marsiglio, Day, and Lamb 2000)—may increase. Greater support from fathers at home could also expand the choices available to women. However, men's valuation of involved fathering also exposes them to the possibility of work-family conflict.

Indeed, I find evidence that men's employment demands restrict their ability to father in the way they would wish. Of particular concern are recent increases in work hours for those in professional and managerial fields (Jacobs and Gerson 2004). Increasing the availability of various job benefits, particularly flexible scheduling, would also be beneficial for fathers. In contrast to work factors, men's social support and fathering examples appear to be consistent with their preferred ways of parenting. This finding is good news for supporters of coparenting.

My study suggests that the enhancement of opportunities for fathers to be more involved in childrearing is important not only for promoting men's agency, but also for child well-being. When fathers are less involved than they would like to be, girls' learning in the areas of reading and math suffers. Other important strategies include

affirming the importance of fathers for girls as well as boys, and promoting shared interests and activities between fathers and daughters. These actions would likely reduce differences in the effects of fathering, which currently provide boys with an advantage over girls.

Most importantly, this research sheds light on an issue of concern to many promoters of shared parenting. Many lament that fathers are less involved in childrearing than we would expect given recent increases in women's—including mothers'—labor force participation and greater expectations for involved fathering (Bretherton, Lambert, and Golby 2005; Parke 1996). First, it appears that this shortfall of highly involved fathering is not due to resistance on the part of men to adopt these expectations, as the majority of men value this type of fathering. Instead, structural barriers to more engaged father-child interactions, particularly high demands in the workplace, seem to be at play. We need to further challenge common assumptions that work-family conflict is a women's issue and that family-friendly work policies benefit only working mothers (Pleck 1993). In short, changes that better enable men to be the types of fathers they desire to be may be beneficial for both fathers and their children.

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## TABLES AND FIGURES

Table 2.1: Comparison of Baseline Models, Full Sample (N=6,150)

Number of Classes	Likelihood Ratio $G^2$	Degrees of Freedom	AIC	ABIC
2	194.15	112	224.15	277.32
<b>3</b>	<b>93.26</b>	<b>104</b>	<b>139.26</b>	<b>220.79</b>
4	74.63	96	136.63	246.52
5	53.95	88	131.95	270.20

*Note:* Boldface type indicates selected model. AIC = Akaike's Information Criterion; ABIC = sample size-adjusted Bayesian Information Criterion.



Table 2.2: Item-Response Probabilities for Three-Class Model: Probability of Agreeing with Item Given Latent Class, Full Sample (N=6,150)

<i>Item</i>	<i>Latent Class</i>		
	<i>Involved Fathering</i>	<i>Adaptive Involved Fathering</i>	<i>Resistant Involved Fathering</i>
	78.48% (3.65%)	17.83% (3.89%)	3.68% (1.59%)
Father Must Play with Child	0.9999 (0.0005)	0.9978 (0.0027)	0.9427 (0.0259)
Men Difficult Express Affection toward Babies	0.1036 (0.0102)	0.4216 (0.0491)	0.3161 (0.0661)
Father Should be as Involved as Mother	0.9263 (0.0056)	0.9453 (0.0210)	0.4618 (0.1157)
Father's Treatment has Long-Term Effects	1.0000 (0.0004)	0.9424 (0.0145)	0.8012 (0.0592)
Provision More Important than Activities	0.0100 (0.0176)	0.5327 (0.0711)	0.2475 (0.0606)
Important for Father to Encourage Mother	0.9312 (0.0044)	0.9831 (0.0114)	0.7543 (0.0688)
Fatherhood Highly Rewarding	0.9986 (0.0012)	0.9912 (0.0057)	0.8618 (0.0517)

Note: Standard errors in parentheses.

Table 2.3: Comparison of Baseline Models, By Race/Ethnicity

Number of Classes	Likelihood Ratio $G^2$	Degrees of Freedom	AIC	ABIC
<i>White Non-Hispanics (N=3,500)</i>				
<b>2</b>	<b>99.60</b>	<b>112</b>	<b>129.60</b>	<b>174.25</b>
3	76.76	104	122.76	191.22
4	61.82	96	123.82	216.09
5	44.45	88	122.45	238.53
<i>Black Non-Hispanics (N=500)</i>				
<b>2</b>	<b>45.65</b>	<b>112</b>	<b>75.65</b>	<b>91.29</b>
3	20.57	104	66.57	90.55
4	11.81	96	73.81	106.13
5	7.31	88	85.31	125.97
<i>Hispanics (N=950)</i>				
2	85.57	112	115.57	140.93
<b>3</b>	<b>49.03</b>	<b>104</b>	<b>95.03</b>	<b>133.92</b>
4	34.94	96	96.94	149.36
5	25.28	88	103.28	169.23
<i>Asian Non-Hispanics (N=850)</i>				
2	85.43	112	115.43	139.10
<b>3</b>	<b>48.90</b>	<b>104</b>	<b>94.90</b>	<b>131.19</b>
4	30.71	96	92.71	141.62
5	24.00	88	102.00	163.53
<i>Other Race (N=350)</i>				
<b>2</b>	<b>20.48</b>	<b>112</b>	<b>50.48</b>	<b>59.75</b>
3	12.43	104	58.43	72.64
4	6.65	96	68.65	87.80
5	4.10	88	82.10	106.20

Note: Boldface type indicates selected models. AIC = Akaike's Information Criterion; ABIC = sample size-adjusted Bayesian Information Criterion.

Table 2.4: Item-Response Probabilities for Selected Models: Probability of Agreeing with Item Given Latent Class, By Race/Ethnicity

<i>Item</i>	<i>Latent Class</i>						
	<i>White Non-Hispanics (N=3,500)</i>		<i>Black Non-Hispanics (N=500)</i>		<i>Hispanics (N=950)</i>		
	<i>Involved Fathering</i>	<i>Resistant Involved Fathering</i>	<i>Involved Fathering</i>	<i>Adaptive Involved Fathering</i>	<i>Involved Fathering</i>	<i>Adaptive Involved Fathering</i>	<i>Affectionate Providing</i>
	93.19%	6.81%	86.29%	13.71%	67.85%	28.03%	4.12%
	(2.66%)	(2.66%)	(6.84%)	(6.84%)	(6.50%)	(6.14%)	(1.87%)
Father Must Play with Child	1.0000	0.9705	0.9977	1.0000	1.0000	0.9967	0.9460
	(0.0000)	(0.0158)	(0.0023)	(0.0005)	(0.0001)	(0.0039)	(0.0428)
Men Difficult Express Affection toward Babies	0.1008	0.4696	0.0978	0.6343	0.1587	0.5071	0.1100
	(0.0094)	(0.0821)	(0.0278)	(0.1760)	(0.0325)	(0.0455)	(0.0988)
Father Should be as Involved as Mother	0.9142	0.6431	0.9775	0.9069	0.9671	0.9924	0.6791
	(0.0068)	(0.0793)	(0.0091)	(0.0495)	(0.0084)	(0.0118)	(0.1189)
Father's Treatment has Long-Term Effects	0.9994	0.8813	0.9974	0.8669	0.9886	0.9378	0.6836
	(0.0018)	(0.0411)	(0.0051)	(0.0643)	(0.0087)	(0.0214)	(0.1181)
Provision More Important than Activities	0.0345	0.2710	0.0565	0.6458	0.0062	0.7188	0.6403
	(0.0055)	(0.0667)	(0.0297)	(0.1838)	(0.0203)	(0.1481)	(0.1703)
Important for Father to Encourage Mother	0.9307	0.8727	0.9407	0.9295	0.9366	0.9998	0.8432
	(0.0052)	(0.0393)	(0.0123)	(0.0433)	(0.0112)	(0.0015)	(0.0818)
Fatherhood Highly Rewarding	0.9985	0.9661	0.9925	0.9588	0.9964	0.9998	0.7243
	(0.0012)	(0.0179)	(0.0055)	(0.0318)	(0.0042)	(0.0022)	(0.1208)

Note: Standard errors in parentheses.

Table 2.4, Continued: Item-Response Probabilities for Selected Models: Probability of Agreeing with Item Given Latent Class, By Race/Ethnicity

<i>Item</i>	<i>Latent Class</i>				
	<i>Asian Non-Hispanics (N=850)</i>			<i>Other Race (N=350)</i>	
	<i>Involved Fathering</i>	<i>Adaptive Involved Fathering</i>	<i>Uninvolved Fathering</i>	<i>Involved Fathering</i>	<i>Adaptive Involved Fathering</i>
	52.95% (8.81%)	39.02% (9.61%)	8.02% (5.13%)	64.69% (14.49%)	35.31% (14.49%)
Father Must Play with Child	1.0000 (0.0001)	0.9942 (0.0045)	0.9848 (0.0178)	0.9906 (0.0070)	1.0000 (0.0008)
Men Difficult Express Affection toward Babies	0.0141 (0.0458)	0.5330 (0.0932)	0.3849 (0.1102)	0.0262 (0.0547)	0.3888 (0.1154)
Father Should be as Involved as Mother	0.9664 (0.0396)	0.9651 (0.0747)	0.0781 (0.1329)	0.9628 (0.0307)	0.8245 (0.0551)
Father's Treatment has Long-Term Effects	0.9997 (0.0026)	0.9531 (0.0158)	0.8365 (0.0962)	1.0000 (0.0005)	0.9651 (0.0222)
Provision More Important than Activities	0.0860 (0.0395)	0.3781 (0.0529)	0.1683 (0.0673)	0.0115 (0.0427)	0.3198 (0.1082)
Important for Father to Encourage Mother	0.9205 (0.0159)	0.9839 (0.0111)	0.8549 (0.0861)	0.9194 (0.0235)	0.9817 (0.0232)
Fatherhood Highly Rewarding	0.9889 (0.0062)	0.9891 (0.0079)	0.9206 (0.0554)	1.0000 (0.0003)	0.9914 (0.0093)

Note: Standard errors in parentheses.

Table 2.5: Comparison of Baseline Models, By Class

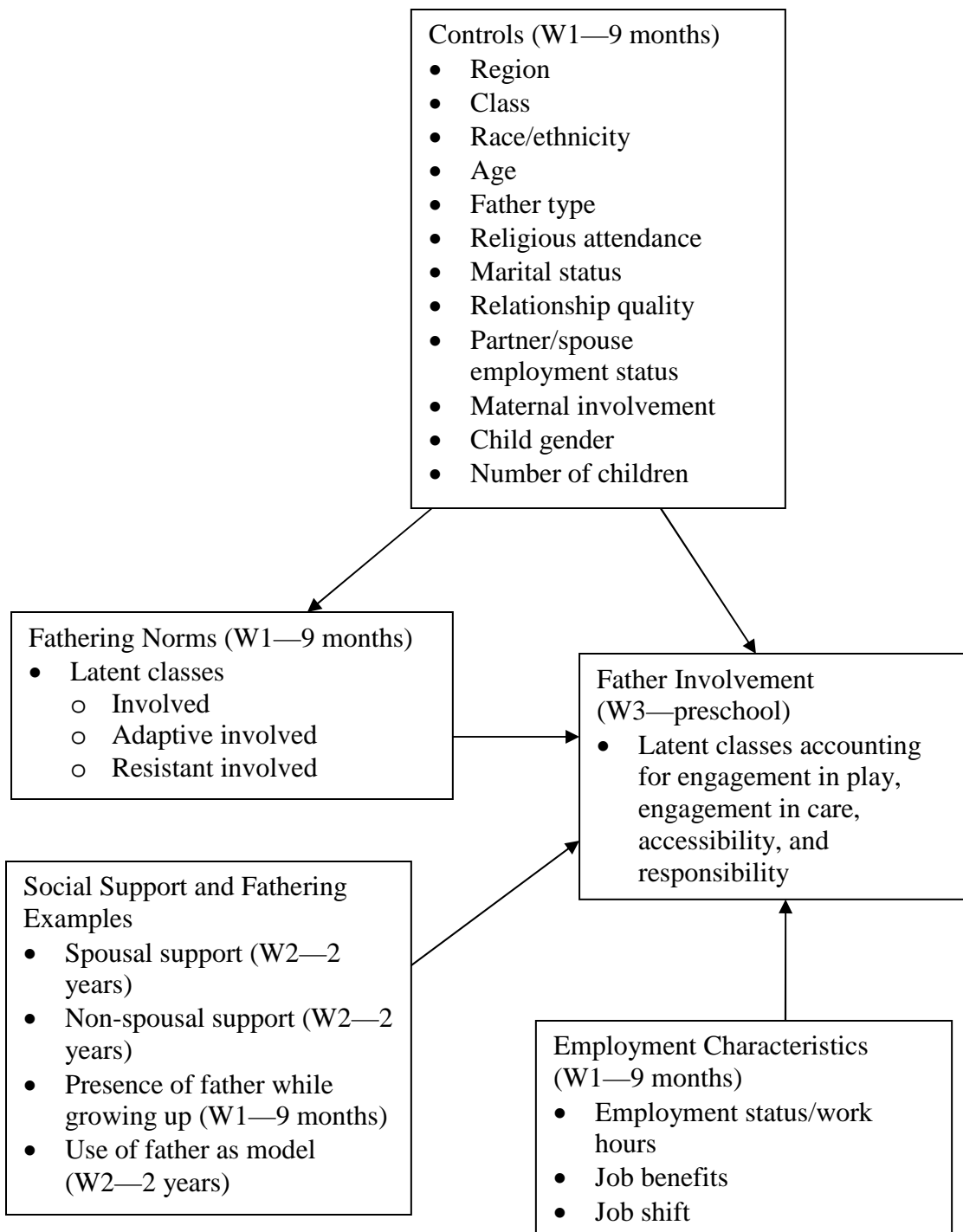
Number of Classes	Likelihood Ratio $G^2$	Degrees of Freedom	AIC	ABIC
<i>Non-Professionals (N=3,950)</i>				
2	145.00	112	175.00	221.56
<b>3</b>	<b>65.55</b>	<b>104</b>	<b>111.55</b>	<b>182.93</b>
4	43.85	96	105.85	202.06
5	32.86	88	110.86	231.90
<i>Professionals (N=2,150)</i>				
<b>2</b>	<b>77.32</b>	<b>112</b>	<b>107.32</b>	<b>144.88</b>
3	51.82	104	97.82	155.42
4	44.23	96	106.23	183.85
5	26.52	88	104.52	202.18

Note: Boldface type indicates selected models. AIC = Akaike's Information Criterion; ABIC = sample size-adjusted Bayesian Information Criterion.

Table 2.6: Item-Response Probabilities for Selected Models: Probability of Agreeing with Item Given Latent Class, By Class

<i>Item</i>	<i>Latent Class</i>				
	<i>Non-Professionals (N=3,950)</i>			<i>Professionals (N=2,150)</i>	
	<i>Involved Fathering</i>	<i>Adaptive Involved Fathering</i>	<i>Resistant Involved Fathering</i>	<i>Involved Fathering</i>	<i>Resistant Involved Fathering</i>
	74.01%	22.97%	3.02%	94.54%	5.46%
	(2.98%)	(3.31%)	(1.61%)	(2.16%)	(2.16%)
Father Must Play w/ Child	0.9999 (0.0006)	0.9950 (0.0031)	0.9743 (0.0197)	1.0000 (0.0001)	0.9327 (0.0346)
Men Difficult Express Affection toward Babies	0.1074 (0.0136)	0.4368 (0.0241)	0.3108 (0.0919)	0.1141 (0.0098)	0.3889 (0.0820)
Father Should be as Involved as Mother	0.9501 (0.0058)	0.9518 (0.0180)	0.4542 (0.1417)	0.8949 (0.0103)	0.4636 (0.1050)
Father's Treatment has Long-Term Effects	0.9998 (0.0020)	0.9308 (0.0121)	0.8162 (0.0676)	1.0000 (0.0006)	0.8153 (0.0784)
Provision More Important than Activities	0.0009 (0.0041)	0.5486 (0.0707)	0.2789 (0.0772)	0.0625 (0.0069)	0.1740 (0.0642)
Important for Father to Encourage Mother	0.9294 (0.0058)	0.9879 (0.0094)	0.6031 (0.1369)	0.9354 (0.0057)	0.9334 (0.0378)
Fatherhood Highly Rewarding	0.9987 (0.0016)	0.9873 (0.0065)	0.8213 (0.0775)	0.9980 (0.0014)	0.9410 (0.0314)

Note: Standard errors in parentheses.



**Figure 3.1: Chapter 3 Conceptual Model**

Table 3.1: Weighted Descriptive Statistics, Independent and Control Variables (N=5,350)

<i>Variables</i>	<i>M</i>	<i>SD</i>
<b>Independent Variables</b>		
<i>Attitudes Class (Involved)</i>	0.89	0.32
Adaptive involved	0.09	0.29
Resistant involved	0.02	0.13
<i>Work status/hours (Full time 35-44 hrs)</i>	0.40	0.49
Not in labor force	0.05	0.24
Looking for work	0.03	0.18
Part time	0.04	0.23
Full time 45-54 hrs	0.29	0.45
Full time 55-64 hrs	0.13	0.32
Full time 65+ hrs	0.05	0.23
<i>Sick leave eligible (No)</i>	0.54	0.49
<i>Child care assistance eligible (No)</i>	0.14	0.35
<i>Flexible hours eligible (No)</i>	0.38	0.49
<i>Work shift (Day)</i>	0.68	0.46
Evening	0.05	0.22
Night	0.03	0.17
Rotating	0.05	0.21
Other	0.18	0.39
<i>Spouse/partner very supportive (No)</i>	0.92	0.27
<i>Non-spousal support index (Range 0-5)</i>	2.72	1.99
<i>Years with father (Range 0-16)</i>	12.97	5.48
<i>Father as model (Range 1-4)</i>	2.81	1.02
<b>Control Variables</b>		
<i>Region (Northeast)</i>	0.17	0.36
Midwest	0.23	0.44
South	0.34	0.46
West	0.26	0.45
<i>Professional/managerial occupation (No)</i>	0.34	0.49
<i>Race/ethnicity (White non-Hispanic)</i>	0.66	0.50
Hispanic	0.22	0.37
Black non-Hispanic	0.06	0.26
Asian non-Hispanic	0.04	0.35
Other	0.02	0.22
<i>Age (Range 17-73)</i>	32.39	6.63
<i>Other father type (Birth/adoptive father)</i>	0.01	0.07
<i>Religious attendance (Range 1-5)</i>	3.01	1.50
<i>Married (No)</i>	0.88	0.32
<i>Relationship quality (Range 1-3)</i>	2.73	0.47
<i>Mother's employment status (Full-time)</i>	0.30	0.47
Part-time	0.23	0.40
Looking for work	0.04	0.20
Not in the labor force	0.43	0.50
<i>High maternal involvement (No)</i>	0.77	0.44
<i>Child female (Male)</i>	0.48	0.50
<i>Number of children (Range 1-9)</i>	2.09	1.14

Note: Italics indicate reference group.



Table 3.2: Comparison of Baseline Models (N=5,350)

Number of Classes	Likelihood Ratio $G^2$	Degrees of Freedom	AIC	BIC
2	11336.92	20702	11402.92	11620.27
3	7931.66	20685	8031.66	8360.98
4	5022.74	20668	5156.74	5598.03
5	3885.47	20651	4053.47	4606.74
6	3579.07	20634	3781.07	4446.31
<b>7</b>	<b>3378.56</b>	<b>20617</b>	<b>3614.56</b>	<b>4391.77</b>
8	3250.99	20600	3520.99	4410.17

*Note:* Boldface type indicates selected model. AIC = Akaike's Information Criterion; BIC = Bayesian Information Criterion.

Table 3.3: Item-Response Probabilities for Seven-Class Model (N=5,350)

<i>Item</i>	<i>Latent Class</i>							
	<i>Play-focused Fathers</i>		<i>Sideline Fathers</i>		<i>Responsibility-focused Fathers</i>		<i>Responsibility Avoiders</i>	
	11.06% (0.90%)		19.80% (1.41%)		14.63% (1.69%)		14.62% (0.76%)	
	Highly Involved	Not Asked	Highly Involved	Not Asked	Highly Involved	Not Asked	Highly Involved	Not Asked
Plays Outside with Child	0.5169 (0.0240)	--	0.5215 (0.0209)	--	0.5634 (0.0246)	--	0.8119 (0.0172)	--
Plays Toys with Child	0.4799 (0.0244)	--	0.4359 (0.0227)	--	0.5482 (0.0255)	--	0.7269 (0.0195)	--
Prepares Child Meals	0.0278 (0.0092)	--	0.0213 (0.0084)	--	0.0368 (0.0111)	--	0.2443 (0.0183)	--
Helps Child to Bed	0.2542 (0.0233)	--	0.2626 (0.0213)	--	0.1746 (0.0293)	--	0.8358 (0.0176)	--
Helps Child Bathe	0.0245 (0.0087)	--	0.0115 (0.0057)	--	0.0017 (0.0057)	--	0.4247 (0.0226)	--
Helps Child Dress	0.0536 (0.0131)	--	0.0657 (0.0135)	--	0.0117 (0.0121)	--	0.6917 (0.0232)	--
Helps Child Brush Teeth	0.0550 (0.0132)	--	0.0589 (0.0130)	--	0.0053 (0.0107)	--	0.7011 (0.0235)	--
Eats Dinner with Child	0.2714 (0.0218)	--	0.2877 (0.0187)	--	0.3622 (0.0241)	--	0.4457 (0.0213)	--
Influences Discipline	0.2626 (0.0337)	0.0000 (0.0001)	0.7932 (0.0212)	0.0000 (0.0001)	0.9362 (0.0132)	0.0000 (0.0001)	0.5137 (0.0221)	0.0000 (0.0001)
Influences Nutrition	0.0046 (0.0087)	0.0000 (0.0001)	0.1626 (0.0306)	0.0000 (0.0001)	0.8703 (0.0633)	0.0000 (0.0001)	0.1077 (0.0161)	0.0000 (0.0001)
Influences Health Care	0.0528 (0.0180)	0.0000 (0.0001)	0.4764 (0.0493)	0.0000 (0.0001)	0.9926 (0.0199)	0.0000 (0.0001)	0.2200 (0.0236)	0.0000 (0.0001)
Influences Education	0.0052 (0.0153)	0.0000 (0.0001)	0.8003 (0.0428)	0.0000 (0.0001)	0.9849 (0.0098)	0.0000 (0.0001)	0.4663 (0.0241)	0.0000 (0.0001)

Notes: Standard errors in parentheses; -- indicates not applicable.

Table 3.3, Continued: Item-Response Probabilities for Seven-Class Model (N=5,350)

<i>Item</i>	<i>Latent Class</i>					
	<i>Reluctant Caregivers</i>		<i>Primary Fathers</i>		<i>Highly Involved Fathers</i>	
	25.29% (1.06%)		2.89% (0.23%)		11.72% (1.02%)	
	Highly Involved	Not Asked	Highly Involved	Not Asked	Highly Involved	Not Asked
Plays Outside with Child	0.8011 (0.0151)	--	0.8148 (0.0315)	--	0.9317 (0.0165)	--
Plays Toys with Child	0.7281 (0.0160)	--	0.7258 (0.0361)	--	0.8732 (0.0185)	--
Prepares Child Meals	0.1806 (0.0159)	--	0.5762 (0.0400)	--	0.5304 (0.0290)	--
Helps Child to Bed	0.7462 (0.0209)	--	0.8122 (0.0318)	--	0.9631 (0.0129)	--
Helps Child Bathe	0.2312 (0.0218)	--	0.4706 (0.0404)	--	0.7783 (0.0322)	--
Helps Child Dress	0.4470 (0.0318)	--	0.5994 (0.0397)	--	0.9763 (0.0165)	--
Helps Child Brush Teeth	0.5147 (0.0318)	--	0.6301 (0.0391)	--	0.9550 (0.0154)	--
Eats Dinner with Child	0.5042 (0.0178)	--	0.5537 (0.0403)	--	0.6214 (0.0251)	--
Influences Discipline	0.9419 (0.0095)	0.0000 (0.0000)	0.0007 (0.0021)	0.9991 (0.0025)	0.9508 (0.0128)	0.0000 (0.0001)
Influences Nutrition	0.7567 (0.0178)	0.0000 (0.0000)	0.0004 (0.0017)	0.9991 (0.0024)	0.8682 (0.0200)	0.0000 (0.0001)
Influences Health Care	0.9560 (0.0104)	0.0000 (0.0000)	0.0006 (0.0020)	0.9991 (0.0024)	0.9632 (0.0109)	0.0000 (0.0001)
Influences Education	0.9798 (0.0067)	0.0000 (0.0000)	0.0007 (0.0021)	0.9991 (0.0025)	0.9789 (0.0081)	0.0000 (0.0001)

Notes: Standard errors in parentheses; -- indicates not applicable.

Table 3.4: Summary of Father Involvement Classes

<i>Class</i>	<i>Description</i>
Play-focused Fathers	<ul style="list-style-type: none"> <li>• Some play</li> <li>• Lower care, accessibility, and responsibility</li> </ul>
Sideline Fathers	<ul style="list-style-type: none"> <li>• Some play</li> <li>• Lower care and accessibility</li> <li>• Considerable responsibility</li> </ul>
Responsibility-focused Fathers	<ul style="list-style-type: none"> <li>• Some play and accessibility</li> <li>• Lower care</li> <li>• Higher responsibility</li> </ul>
Responsibility Avoiders	<ul style="list-style-type: none"> <li>• Considerable play, care, and accessibility</li> <li>• Some responsibility</li> </ul>
Reluctant Caregivers	<ul style="list-style-type: none"> <li>• Considerable play</li> <li>• Some care</li> <li>• Higher accessibility and responsibility</li> </ul>
Primary Fathers	<ul style="list-style-type: none"> <li>• Considerable play and care</li> <li>• Higher accessibility</li> <li>• Not asked responsibility</li> </ul>
Highly Involved Fathers	<ul style="list-style-type: none"> <li>• Higher play, care, accessibility, and responsibility</li> </ul>

Table 3.5: Latent Class Analysis with Covariates, Model 1: Regression of Father Involvement Classes on Attitudes (N=4,150)

	Sideline Father		Responsibility-focused Father		Responsibility Avider	
	$\beta$ (SE)	$e^\beta$	$\beta$ (SE)	$e^\beta$	$\beta$ (SE)	$e^\beta$
<b>Attitudes Class (<i>Involved</i>)</b>						
Adaptive involved	-0.44*(0.21)	0.64	-0.32*(0.15)	0.73	-0.11 (0.15)	0.89
Resistant involved	-0.78†(0.42)	0.46	-0.82**(0.30)	0.44	-0.25 (0.27)	0.78
<b>Constant</b>	-2.63		-1.38		0.27	
<b>Log-likelihood</b>			-26047.95			

Notes: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ , † $p < .1$  (two-tailed tests).

Reference involvement class is play-focused father; Italics indicate reference group.

Model controls for: region, class, race/ethnicity, father's age, father type, religious attendance, marital status, relationship quality, maternal employment status, maternal involvement, child gender, and number of children.

Table 3.5, Continued: Latent Class Analysis with Covariates, Model 1: Regression of Father Involvement Classes on Attitudes (N=4,150)

	Reluctant Caregiver		Primary Father		Highly Involved Father	
	$\beta$ (SE)	$e^{\beta}$	$\beta$ (SE)	$e^{\beta}$	$\beta$ (SE)	$e^{\beta}$
<b>Attitudes Class (<i>Involved</i>)</b>						
Adaptive involved	-0.11 (0.14)	0.90	-0.35 (0.29)	0.71	0.27†(0.16)	1.31
Resistant involved	-0.32 (0.26)	0.72	-0.29 (0.54)	0.75	-0.41 (0.37)	0.66
<b>Constant</b>	-0.79		0.09		-2.21	
<b>Log-likelihood</b>	-26047.95					

Notes: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ , † $p < .1$  (two-tailed tests).

Reference involvement class is play-focused father; Italics indicate reference group.

Model controls for: region, class, race/ethnicity, father's age, father type, religious attendance, marital status, relationship quality, maternal employment status, maternal involvement, child gender, and number of children.

Table 3.6: Latent Class Analysis with Covariates, Model 2: Regression of Father Involvement Classes on Attitudes and Employment Characteristics (N=3,900)

	Sideline Father		Responsibility-focused Father		Responsibility Avider	
	$\beta$ (SE)	$e^\beta$	$\beta$ (SE)	$e^\beta$	$\beta$ (SE)	$e^\beta$
<b>Attitudes Class (<i>Involved</i>)</b>						
Adaptive involved	-0.29 (0.21)	0.75	-0.31†(0.16)	0.73	-0.12 (0.16)	0.89
Resistant involved	-0.82†(0.43)	0.44	-0.70*(0.31)	0.50	-0.19 (0.27)	0.82
<b>Employment Characteristics</b>						
Work status/hours ( <i>Full time 35-44 hrs</i> )						
Not in labor force	0.22 (0.37)	1.24	0.32 (0.28)	1.38	1.13*** (0.28)	3.09
Looking for work	-0.84†(0.51)	0.43	0.05 (0.29)	1.05	0.19 (0.32)	1.21
Part time	0.52†(0.27)	1.69	0.15 (0.23)	1.16	0.07 (0.25)	1.07
Full time 45-54 hrs	0.15 (0.14)	1.16	0.13 (0.10)	1.14	0.25*(0.11)	1.28
Full time 55-64 hrs	0.03 (0.18)	1.03	0.05 (0.13)	1.05	-0.12 (0.14)	0.88
Full time 65+ hrs	0.05 (0.24)	1.05	0.34†(0.17)	1.40	-0.32 (0.21)	0.73
Sick leave eligible ( <i>No</i> )	0.08 (0.13)	1.08	0.21*(0.10)	1.24	0.08 (0.11)	1.08
Child care assistance eligible ( <i>No</i> )	-0.09 (0.17)	0.92	0.17 (0.13)	1.19	0.08 (0.14)	1.09
Flexible hours eligible ( <i>No</i> )	0.06 (0.12)	1.06	-0.04 (0.09)	0.96	0.08 (0.10)	1.09
Work shift ( <i>Day</i> )						
Evening	-0.44†(0.27)	0.64	-0.53*(0.21)	0.59	0.04 (0.19)	1.04
Night	-0.53 (0.35)	0.59	-0.32 (0.24)	0.72	-0.49†(0.27)	0.61
Rotating	-0.38 (0.28)	0.68	0.13 (0.18)	1.14	-0.40†(0.21)	0.67
Other	0.14 (0.18)	1.15	0.16 (0.14)	1.17	-0.26 (0.17)	0.77
<b>Constant</b>	-2.51		-1.48		0.28	
<b>Log-likelihood</b>						-24671.90

Notes: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ , † $p < .1$  (two-tailed tests).

Reference involvement class is play-focused father; *Italics* indicate reference group.

Model controls for: region, class, race/ethnicity, father's age, father type, religious attendance, marital status, relationship quality, maternal employment status, maternal involvement, child gender, and number of children.

Table 3.6, Continued: Latent Class Analysis with Covariates, Model 2: Regression of Father Involvement Classes on Attitudes and Employment Characteristics (N=3,900)

	Reluctant Caregiver		Primary Father		Highly Involved Father	
	$\beta$ (SE)	$e^\beta$	$\beta$ (SE)	$e^\beta$	$\beta$ (SE)	$e^\beta$
<b>Attitudes Class (<i>Involved</i>)</b>						
Adaptive involved	-0.03 (0.15)	0.97	-0.28 (0.30)	0.76	0.36*(0.17)	1.43
Resistant involved	-0.29 (0.27)	0.75	-0.19 (0.55)	0.83	-0.37 (0.37)	0.69
<b>Employment Characteristics</b>						
Work status/hours ( <i>Full time 35-44 hrs</i> )						
Not in labor force	0.55*(0.26)	1.74	1.11*(0.44)	3.04	0.63*(0.30)	1.87
Looking for work	0.02 (0.29)	1.02	0.59 (0.48)	1.81	0.32 (0.32)	1.37
Part time	0.27 (0.22)	1.31	0.69†(0.37)	1.99	0.78*** (0.23)	2.19
Full time 45-54 hrs	0.09 (0.10)	1.10	-0.26 (0.22)	0.77	0.09 (0.13)	1.10
Full time 55-64 hrs	-0.25*(0.13)	0.78	0.06 (0.26)	1.06	-0.76*** (0.20)	0.47
Full time 65+ hrs	-0.58** (0.19)	0.56	-0.50 (0.44)	0.61	-0.30 (0.24)	0.74
Sick leave eligible ( <i>No</i> )	0.17†(0.10)	1.18	0.08 (0.20)	1.08	0.29*(0.12)	1.33
Child care assistance eligible ( <i>No</i> )	0.30*(0.12)	1.35	0.25 (0.26)	1.28	0.20 (0.16)	1.22
Flexible hours eligible ( <i>No</i> )	-0.08 (0.09)	0.92	-0.06 (0.19)	0.94	0.48*** (0.11)	1.62
Work shift ( <i>Day</i> )						
Evening	-0.13 (0.18)	0.88	-0.60 (0.44)	0.55	0.13 (0.22)	1.14
Night	-0.50*(0.25)	0.61	0.26 (0.40)	1.30	0.62*(0.25)	1.86
Rotating	-0.99*** (0.22)	0.37	-0.08 (0.37)	0.92	0.40†(0.21)	1.50
Other	0.08 (0.14)	1.08	-0.07 (0.29)	0.93	0.49** (0.17)	1.62
<b>Constant</b>	-0.92		-0.18		-2.70	
<b>Log-likelihood</b>				-24671.90		

Notes: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ , † $p < .1$  (two-tailed tests).

Reference involvement class is play-focused father; *Italics* indicate reference group.

Model controls for: region, class, race/ethnicity, father's age, father type, religious attendance, marital status, relationship quality, maternal employment status, maternal involvement, child gender, and number of children.



Table 3.7: Latent Class Analysis with Covariates, Model 3: Regression of Father Involvement Classes on Attitudes, Social Support, and Fathering Examples (N=3,300)

	Sideline Father		Responsibility-focused Father		Responsibility Avider	
	$\beta$ (SE)	$e^{\beta}$	$\beta$ (SE)	$e^{\beta}$	$\beta$ (SE)	$e^{\beta}$
<b>Attitudes Class (<i>Involved</i>)</b>						
Adaptive involved	-0.01 (0.18)	0.99	0.07 (0.19)	1.07	0.27 (0.18)	1.31
Resistant involved	-1.25**(0.40)	0.29	-0.27 (0.32)	0.77	-0.39 (0.31)	0.68
<b>Social Support</b>						
Spouse/partner very supportive ( <i>No</i> )	0.39*(0.18)	1.48	0.62**(0.20)	1.85	0.20 (0.16)	1.22
Non-spousal support index	0.12***(0.02)	1.13	0.13***(0.03)	1.14	0.05†(0.03)	1.05
<b>Fathering Examples</b>						
Years with father	-0.01 (0.01)	0.99	0.00 (0.01)	1.00	0.00 (0.01)	1.00
Father as model	-0.07 (0.05)	0.94	0.01 (0.05)	1.01	-0.07 (0.05)	0.93
<b>Constant</b>	-2.09		-1.61		0.09	
<b>Log-likelihood</b>			-20642.89			

Notes: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ , † $p < .1$  (two-tailed tests).

Reference involvement class is play-focused father; Italics indicate reference group.

Model controls for: region, class, race/ethnicity, father's age, father type, religious attendance, marital status, relationship quality, maternal employment status, maternal involvement, child gender, and number of children.

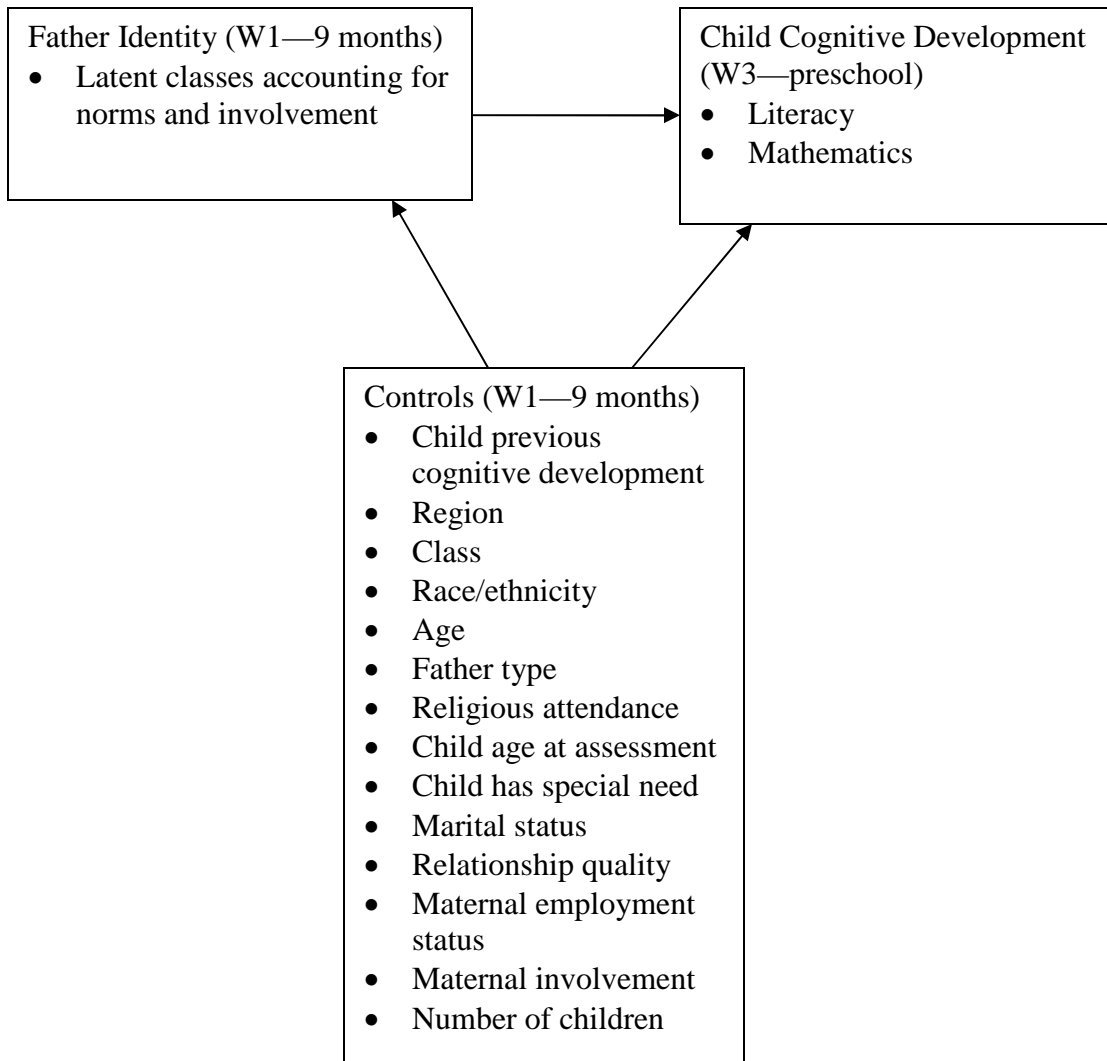
Table 3.7, Continued: Latent Class Analysis with Covariates, Model 3: Regression of Father Involvement Classes on Attitudes, Social Support, and Fathering Examples (N=3,300)

	Reluctant Caregiver		Primary Father		Highly Involved Father	
	$\beta$ (SE)	$e^\beta$	$\beta$ (SE)	$e^\beta$	$\beta$ (SE)	$e^\beta$
<b>Attitudes Class (<i>Involved</i>)</b>						
Adaptive involved	-0.01 (0.22)	0.99	-0.18 (0.37)	0.84	0.25 (0.18)	1.29
Resistant involved	-0.10 (0.34)	0.91	-0.07 (0.56)	0.93	-0.57 (0.38)	0.57
<b>Social Support</b>						
Spouse/partner very supportive ( <i>No</i> )	-0.01 (0.19)	0.99	-1.30***(0.25)	0.27	1.03***(0.25)	2.79
Non-spousal support index	0.16***(0.03)	1.18	0.23***(0.05)	1.26	0.16***(0.03)	1.17
<b>Fathering Examples</b>						
Years with father	-0.01 (0.01)	0.99	-0.04**(0.02)	0.96	-0.02*(0.01)	0.98
Father as model	0.03 (0.05)	1.03	-0.12 (0.09)	0.88	0.10*(0.05)	1.11
<b>Constant</b>	-2.10		1.04		-2.81	
<b>Log-likelihood</b>			-20642.89			

Notes: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ , † $p < .1$  (two-tailed tests).

Reference involvement class is play-focused father; Italics indicate reference group.

Model controls for: region, class, race/ethnicity, father's age, father type, religious attendance, marital status, relationship quality, maternal employment status, maternal involvement, child gender, and number of children.



**Figure 4.1: Chapter 4 Conceptual Model**

Table 4.1: Weighted Descriptive Statistics, Dependent, Grouping, and Control Variables (N=4,650)

<i>Variables</i>	<i>M</i>	<i>SD</i>
<b>Dependent Variables</b>		
Literacy score (Range 0-37)	14.11	7.47
Math score (Range 0-44)	23.59	7.42
<b>Grouping Variable</b>		
Child female ( <i>Male</i> )	0.49	0.50
<b>Control Variables</b>		
Previous cognitive development (Range 0-178)	76.32	9.33
Region ( <i>Northeast</i> )	0.18	0.37
Midwest	0.25	0.44
South	0.34	0.47
West	0.23	0.44
Socioeconomic status ( <i>First quintile</i> )	0.09	0.27
Second quintile	0.16	0.35
Third quintile	0.19	0.39
Fourth quintile	0.26	0.43
Fifth quintile	0.30	0.48
Race/ethnicity ( <i>White non-Hispanic</i> )	0.71	0.49
Hispanic	0.18	0.34
Black non-Hispanic	0.06	0.25
Asian non-Hispanic	0.03	0.35
Other	0.02	0.22
Age (Range 17-73)	32.32	6.62
Other father type ( <i>Birth/adoptive father</i> )	0.01	0.07
Religious attendance (Range 1-5)	3.03	1.50
Child assessment age (Range 44-65)	52.19	4.05
Child has special need ( <i>No</i> )	0.07	0.28
Married ( <i>No</i> )	0.88	0.32
Relationship quality (Range 1-3)	2.73	0.47
Mother's employment status ( <i>Full-time</i> )	0.30	0.47
Part-time	0.23	0.40
Looking for work	0.04	0.20
Not in the labor force	0.42	0.50
Maternal involvement index (Range 0-3)	2.04	0.87
Number of children (Range 1-11)	2.05	1.13

Note: Italics indicate reference group.

Table 4.2: Comparison of Baseline Models (N=4,650)

Number of Classes	Likelihood Ratio $G^2$	Degrees of Freedom	AIC	BIC
2	8559.67	393176	8637.67	8888.83
3	7958.28	393156	7776.28	8156.24
4	6877.36	393136	7035.36	7544.13
5	6646.06	393116	6844.06	7481.63
<b>6</b>	<b>6451.69</b>	<b>393096</b>	<b>6689.69</b>	<b>7456.06</b>
7	6320.58	393076	6598.58	7493.76

Note: Boldface type indicates selected model. AIC = Akaike's Information Criterion; BIC = Bayesian Information Criterion.

Table 4.3: Item-Response Probabilities for Six-Class Model (N=4,650)

Item	Latent Class												
	Adaptive Involved Attitudes, Sideline Behavior (AIS)		Adaptive Involved Attitudes, Somewhat Involved Behavior (AISI)		Involved Attitudes, Responsibility-focused Behavior (IRF)		Involved Attitudes, Considerably Involved Behavior (ICI)		Involved Attitudes, Reluctant Caregiving Behavior (IRC)		Involved Attitudes, Highly Involved Behavior (IHI)		
	14.34% (1.64%)	3.23% (0.54%)	17.59% (2.01%)	19.71% (1.34%)	18.47% (1.42%)	26.65% (1.28%)	Agree/ Highly Involved	Not Asked	Agree/ Highly Involved	Not Asked	Agree/ Highly Involved	Not Asked	Agree/ Highly Involved
Father Must Play w/ Child	0.9907 (0.0040)	--	1.0000 (0.0002)	--	1.0000 (0.0001)	--	0.9989 (0.0012)	--	0.9965 (0.0022)	--	1.0000 (0.0000)	--	
Men Difficult Express Affection toward Babies	0.2502 (0.0239)	--	0.4672 (0.0583)	--	0.1202 (0.0170)	--	0.1241 (0.0140)	--	0.0921 (0.0138)	--	0.1464 (0.0115)	--	
Father Should be as Involved as Mother	0.7374 (0.0229)	--	0.9442 (0.0288)	--	0.8475 (0.0197)	--	0.9427 (0.0094)	--	0.9392 (0.0116)	--	0.9743 (0.0052)	--	
Father's Treatment has Long-Term Effects	0.9638 (0.0088)	--	0.8962 (0.0295)	--	0.9961 (0.0031)	--	0.9988 (0.0022)	--	0.9892 (0.0044)	--	0.9868 (0.0035)	--	
Provision More Important than Activities	0.1480 (0.0197)	--	0.9047 (0.0983)	--	0.0157 (0.0110)	--	0.0456 (0.0099)	--	0.0256 (0.0135)	--	0.1088 (0.0102)	--	
Important for Father to Encourage Mother	0.9148 (0.0137)	--	0.9998 (0.0021)	--	0.9164 (0.0132)	--	0.9402 (0.0097)	--	0.9525 (0.0097)	--	0.9246 (0.0084)	--	
Fatherhood Highly Rewarding	0.9897 (0.0046)	--	0.9470 (0.0207)	--	0.9985 (0.0027)	--	1.0000 (0.0000)	--	1.0000 (0.0002)	--	0.9928 (0.0025)	--	
Plays Peekaboo with Child	0.0004 (0.0016)	--	0.3845 (0.0521)	--	0.2568 (0.0303)	--	0.2822 (0.0222)	--	0.3084 (0.0202)	--	0.6629 (0.0178)	--	
Tickles Child	0.3286 (0.0527)	--	0.7182 (0.0483)	--	0.9138 (0.0292)	--	0.8821 (0.0134)	--	0.9035 (0.0150)	--	0.9771 (0.0054)	--	
Plays Outside with Child	0.2673 (0.0270)	--	0.7465 (0.0480)	--	0.4616 (0.0310)	--	0.4315 (0.0254)	--	0.7571 (0.0236)	--	0.8520 (0.0157)	--	

Notes: Standard errors in parentheses; -- indicates not applicable.

Table 4.3, Continued: Item-Response Probabilities for Six-Class Model (N=4,650)

Item	Latent Class											
	Adaptive Involved Attitudes, Sideline Behavior (AIS)		Adaptive Involved Attitudes, Somewhat Involved Behavior (AIS)		Involved Attitudes, Responsibility-focused Behavior (IRF)		Involved Attitudes, Considerably Involved Behavior (ICI)		Involved Attitudes, Reluctant Caregiving Behavior (IRC)		Involved Attitudes, Highly Involved Behavior (IHI)	
	Agree/ Highly Involved	Not Asked	Agree/ Highly Involved	Not Asked	Agree/ Highly Involved	Not Asked	Agree/ Highly Involved	Not Asked	Agree/ Highly Involved	Not Asked	Agree/ Highly Involved	Not Asked
Changes Child's Diaper	0.0848 (0.0153)	--	0.2392 (0.0498)	--	0.0705 (0.0214)	--	0.7942 (0.0180)	--	0.4335 (0.0274)	--	0.9354 (0.0092)	--
Prepares Child Meals or Bottles	0.0328 (0.0102)	--	0.2114 (0.0556)	--	0.0614 (0.0130)	--	0.9079 (0.0171)	--	0.1153 (0.0207)	--	0.9617 (0.0079)	--
Feeds Child or Gives Bottle	0.0188 (0.0081)	--	0.3247 (0.0605)	--	0.0773 (0.0150)	--	0.9119 (0.0186)	--	0.1137 (0.0209)	--	0.9909 (0.0048)	--
Puts Child to Sleep	0.0037 (0.0069)	--	0.3755 (0.0566)	--	0.0729 (0.0134)	--	0.3145 (0.0245)	--	0.1388 (0.0160)	--	0.7245 (0.0170)	--
Washes Child	0.1896 (0.0228)	--	0.6920 (0.0537)	--	0.1714 (0.0356)	--	0.4788 (0.0252)	--	0.7758 (0.0292)	--	0.9085 (0.0147)	--
Dresses Child	0.0674 (0.0146)	--	0.4511 (0.0573)	--	0.0370 (0.0211)	--	0.4718 (0.0270)	--	0.4983 (0.0308)	--	0.9331 (0.0126)	--
Takes Child on Errands	0.2009 (0.0227)	--	0.5055 (0.0550)	--	0.3384 (0.0268)	--	0.4354 (0.0237)	--	0.5790 (0.0250)	--	0.7391 (0.0155)	--
Decides on Child Care	0.6301 (0.0265)	0.0044 (0.0028)	0.4245 (0.0601)	0.0000 (0.0003)	0.7261 (0.0232)	0.0000 (0.0001)	0.7366 (0.0187)	0.0037 (0.0025)	0.8095 (0.0180)	0.0015 (0.0015)	0.7976 (0.0133)	0.0196 (0.0042)

Notes: Standard errors in parentheses; -- indicates not applicable.

Table 4.4: Summary of Fathering Profile Classes

<i>Class</i>	<i>Description</i>
Adaptive Involved Attitudes, Sideline Behavior (AIS)	<ul style="list-style-type: none"> <li>• Some difficulty with affection and emphasis on provision</li> <li>• Considerably favors equal involvement</li> <li>• Lower play, care, and accessibility</li> <li>• Considerable responsibility</li> </ul>
Adaptive Involved Attitudes, Somewhat Involved Behavior (AISl)	<ul style="list-style-type: none"> <li>• Considerable difficulty with affection</li> <li>• Highly favors equal involvement and prioritizes provision</li> <li>• Considerable play and accessibility</li> <li>• Some care and responsibility</li> </ul>
Involved Attitudes, Responsibility-focused Behavior (IRF)	<ul style="list-style-type: none"> <li>• Little difficulty with affection and emphasis on provision</li> <li>• Highly favors equal involvement</li> <li>• Mixed play</li> <li>• Lower care</li> <li>• Some accessibility</li> <li>• Higher responsibility</li> </ul>
Involved Attitudes, Considerably Involved Behavior (ICI)	<ul style="list-style-type: none"> <li>• Little difficulty with affection and emphasis on provision</li> <li>• Highly favors equal involvement</li> <li>• Mixed play</li> <li>• Considerable care</li> <li>• Some accessibility</li> <li>• Higher responsibility</li> </ul>
Involved Attitudes, Reluctant Caregiving Behavior (IRC)	<ul style="list-style-type: none"> <li>• Little difficulty with affection and emphasis on provision</li> <li>• Highly favors equal involvement</li> <li>• Considerable play and accessibility</li> <li>• Mixed care</li> <li>• Higher responsibility</li> </ul>
Involved Attitudes, Highly Involved Behavior (IHI)	<ul style="list-style-type: none"> <li>• Little difficulty with affection and emphasis on provision</li> <li>• Highly favors equal involvement</li> <li>• Higher play, care, accessibility, and responsibility</li> </ul>



Table 4.5: Regression of Literacy Score on Fathering Profile and Controls, by Sex

	Model 1				Model 2			
	Girls		Boys		Girls		Boys	
	B	SE B	B	SE B	B	SE B	B	SE B
<b>Fathering Profile (AIS)</b>								
AISI	-2.73**	1.01	0.50	0.96	-0.98	0.95	2.37**	0.88
IRF	0.40 <sup>a</sup>	0.52	0.94†	0.54	-0.31	0.46	0.63 <sup>a</sup>	0.49
ICI	-0.59 <sup>ab</sup>	0.55	1.81**	0.56	-1.23* <sup>b</sup>	0.49	1.86*** <sup>b</sup>	0.51
IRC	-0.09 <sup>a</sup>	0.53	1.51**	0.54	-0.80†	0.47	0.76 <sup>c</sup>	0.49
IHI	-0.53 <sup>ab</sup>	0.52	0.17 <sup>cd</sup>	0.52	-0.67	0.49	0.48 <sup>ac</sup>	0.48
<b>Previous cognitive development</b>	0.07***	0.02	0.09***	0.02	0.03*	0.01	0.05**	0.02
<b>Father Characteristics</b>								
Region ( <i>Northeast</i> )								
Midwest					-0.34	0.42	-0.41	0.42
South					-0.09	0.40	-0.58	0.40
West					-0.93*	0.43	-0.05	0.42
Socioeconomic status ( <i>First quintile</i> )								
Second quintile					2.64***	0.63	1.08†	0.59
Third quintile					3.92***	0.64	2.56***	0.60
Fourth quintile					5.67***	0.64	4.14***	0.61
Fifth quintile					7.82***	0.65	6.76***	0.62
Race/Ethnicity ( <i>White non-Hispanic</i> )								
Hispanic					-1.73***	0.41	-1.12**	0.41
Black non-Hispanic					1.82**	0.59	2.71***	0.59
Asian non-Hispanic					3.39***	0.76	2.69***	0.74
Other					-0.86	1.08	-1.62	1.04
Age					0.08**	0.03	0.00	0.02
Other father type ( <i>Birth/adoptive father</i> )					-3.34*	1.59	1.13	2.05
Religious attendance					0.18†	0.10	0.23*	0.10
<b>Child Characteristics</b>								
Child assessment age					0.52***	0.03	0.48***	0.03
Child has special need ( <i>No</i> )					1.30*	0.54	0.62	0.52
<b>Family Characteristics</b>								
Married ( <i>No</i> )					-0.79	0.52	0.30	0.45
Relationship Quality					0.26	0.30	0.34	0.28
Maternal employment status ( <i>Full-time</i> )								
Part-time					0.30	0.37	0.95**	0.37
Looking for work					1.34†	0.73	0.31	0.67
Not in labor force					0.57†	0.03	0.46	0.34
Maternal involvement index					0.33*	0.16	0.55***	0.16
Number of children					-1.34***	0.13	-1.01***	0.12
Constant	9.82		5.96		-20.65		-21.04	
R <sup>2</sup>	0.01		0.02		0.29		0.27	
F	5.22***		7.99***		28.59***		27.22***	
N	2,172		2,285		2,083		2,208	

Notes: \*p < .05, \*\*p < .01, \*\*\*p < .001, †p < .1 (two-tailed tests).

Italics indicate reference group.

<sup>a</sup>Differs from AISI. <sup>b</sup>Differs from IRF. <sup>c</sup>Differs from ICI. <sup>d</sup>Differs from IRC, all p < .05.

Table 4.6: Regression of Math Score on Fathering Profile and Controls, by Sex

	Model 1				Model 2			
	Girls		Boys		Girls		Boys	
	B	SE B	B	SE B	B	SE B	B	SE B
<b>Fathering Profile (AIS)</b>								
AISI	-2.68**	0.96	-0.57	0.96	-0.46	0.89	1.64†	0.85
IRF	1.17* <sup>a</sup>	0.50	0.83	0.56	0.42	0.44	0.51	0.49
ICI	-0.39 <sup>ab</sup>	0.52	0.59	0.57	-0.98* <sup>b</sup>	0.46	0.63	0.51
IRC	-0.03 <sup>ab</sup>	0.50	1.23* <sup>a</sup>	0.56	-0.60 <sup>b</sup>	0.44	0.45	0.49
IHI	-0.32 <sup>ab</sup>	0.50	-0.80 <sup>bcd</sup>	0.53	-0.55 <sup>b</sup>	0.44	-0.29 <sup>abc</sup>	0.48
<b>Previous cognitive development</b>	0.06***	0.05	0.09***	0.02	0.02†	0.01	0.05**	0.02
<b>Father Characteristics</b>								
Region ( <i>Northeast</i> )								
Midwest					-1.46***	0.40	-0.43	0.42
South					-1.12**	0.37	-1.10**	0.39
West					-1.23**	0.41	-0.44	0.42
Socioeconomic status ( <i>First quintile</i> )								
Second quintile					3.40***	0.59	1.09†	0.57
Third quintile					4.78***	0.60	2.87***	0.59
Fourth quintile					6.39***	0.60	5.04***	0.60
Fifth quintile					8.41***	0.61	7.20***	0.61
Race/Ethnicity ( <i>White non-Hispanic</i> )								
Hispanic					-2.15***	0.38	-1.44***	0.41
Black non-Hispanic					-0.74	0.56	0.56	0.59
Asian non-Hispanic					1.71*	0.71	1.68*	0.74
Other					-1.85†	1.02	-1.51	1.02
Age					0.08***	0.02	0.03	0.02
Other father type ( <i>Birth/adoptive father</i> )					-2.94*	1.50	1.87	2.05
Religious attendance					-0.02	0.09	0.30**	0.10
<b>Child Characteristics</b>								
Child assessment age					0.57***	0.03	0.61***	0.03
Child has special need ( <i>No</i> )					-0.01	0.51	0.55	0.51
<b>Family Characteristics</b>								
Married ( <i>No</i> )					-0.36	0.49	0.70	0.45
Relationship Quality					0.04	0.29	0.29	0.28
Maternal employment status ( <i>Full-time</i> )								
Part-time					0.06	0.35	0.54	0.37
Looking for work					0.92	0.69	-0.48	0.67
Not in labor force					0.20	0.32	-0.04	0.34
Maternal involvement index					0.21	0.15	0.30†	0.16
Number of children					-0.93***	0.12	-0.46***	0.12
Constant	19.30		15.52		-12.42		19.40	
R <sup>2</sup>	0.02		0.02		0.31		0.30	
F	7.18***		9.27***		32.13***		32.57***	
N	2,189		2,289		2,098		2,212	

Notes: \*p < .05, \*\*p < .01, \*\*\*p < .001, †p < .1 (two-tailed tests).

Italics indicate reference group.

<sup>a</sup>Differs from AISI. <sup>b</sup>Differs from IRF. <sup>c</sup>Differs from ICI. <sup>d</sup>Differs from IRC, all p < .05.