

YOUNG ADULTS' RELATIONSHIPS WITH GRANDPARENTS:
PARENTS' INTERGENERATIONAL TIES AND
GRANDCHILDREN'S ADULT ROLES

By

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A dissertation submitted in partial fulfillment of
the requirements for the degree of

DOCTOR OF PHILOSOPHY

WASHINGTON STATE UNIVERSITY
Department of Sociology

MAY 2008

To the Faculty of Washington State University:

The members of the Committee appointed to examine the dissertation of MARIA ALEKSANDROVNA MONSERUD find it satisfactory and recommend that it be accepted.

Chair

ACKNOWLEDGMENT

I would like to express my gratitude and appreciation to my dissertation committee. Most importantly, I want to thank Monica Kirkpatrick Johnson, the chair of my dissertation committee. Monica has been an amazing mentor to me throughout my graduate training at Washington State University. I have learned so much from her. I am indebted to Monica for her encouragement, assistance, and patience. She has been an important source of motivation and support for me over the last four years. Additionally, I would like to thank her for the time that she has invested in me.

I would also like to thank Irene R. Beattie and Annabel R. Kirschner for playing important parts in my graduate training. I am thankful to them for being on my committee and for supporting me in all my educational pursuits. I want to thank Irene for sharing with me her invaluable expertise in statistics, gender, and education. I am extremely grateful to Annabel for supporting and encouraging my interests in population studies.

I am also thankful to my mother, Svetlana M. Kutilina, for her support, encouragement, and understanding throughout my graduate training.

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Abstract

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This dissertation focuses on contact and closeness between young adults (ages 18 – 34) and their grandparents. The first chapter uses data Waves 2 and 3 of the National Survey of Families and Households (NSFH) to examine whether changes in parents' intergenerational ties are associated with changes in the grandparent-grandchild relationship. The results indicate that improvements in parents' relationships with their offspring, their own parents, and their parents-in-law are predictive of positive changes in the grandparent-grandchild bond. Additionally, the findings demonstrate that mother's as well as father's intergenerational ties in the family are more influential for granddaughters' than grandsons' relationships with grandparents. Drawing on data from Wave 3 of the NSFH, the second chapter investigates whether grandchildren's adult roles (i.e., residential independence, school enrollment, full-time employment, marriage and parenthood) are related to the grandparent-grandchild bond. The analysis reveals that grandchildren's adult roles can be negatively as well as positively associated with the grandparent-grandchild bond. Also, the findings suggest that it is necessary to take into

account lineage and the grandparents' gender in order to better understand differences in these associations. However, the idea that the grandchild's gender can moderate these associations received limited support. The third chapter examines the associations between changes in grandchildren's adult roles and changes in the grandparent-grandchild relationship. Using data from Waves 2 and 3 of the NSFH, this chapter centers on role acquisitions/occupations and exits related to young adults' residential independence, school enrollment, full-time employment, marital status, and parenthood status. Findings suggest that young adults who do not reside with their parents or those who work full-time can experience the deterioration of their ties to grandparents. In contrast, with a few small exceptions, young adults who are divorced, separated, or have children can experience improvements in their involvement with grandparent. Overall, the results reveal that the associations between changes in grandchildren's adult roles and the grandparent-grandchild relationship are complex, and vary by the role in question, a specific dimension of intergenerational solidarity between grandchildren and grandparents, by lineage, and the grandchild's as well as grandparent's gender.

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Dedication

This dissertation is dedicated to my parents and my grandparents.

CHAPTER 1

INTRODUCTION

The grandparent-grandchild relationship changes over the life course. This relationship is most likely to be renegotiated when grandchildren transition to young adulthood and acquire adult roles. In general, young adults become more autonomous from their parents and their grandparents. The extent literature indicates, however, that parents' intergenerational ties still matter for the grandparent-grandchild bond when grandchildren become adults (e.g., Brown, 2003; Hodgson, 1992; Matthews & Sprey, 1985; Monserud, 2008; Thompson & Walker, 1987). Yet, previous studies have not considered whether possible changes in parents' relationships with their offspring, their own parents, and their parents-in-law are linked to the dynamic nature of the grandparent-grandchild relationship over the life course. Do young adults become less sensitive to family dynamics in their families of origin when their attention shifts to their own families and careers? In other word, are parents' changing intergenerational relationships partly responsible for the dynamic nature of the grandparent-grandchild relationship over the life course, despite the fact that adult grandchildren are less dependent on their families of origin?

In addition to changing intergenerational ties in the family, grandchildren's adult roles can also be linked to changes in the grandparent-grandchild relationship over time. For instance, due to competing responsibilities and time constraints, grandchildren's adult roles may be related to weaker relationships with grandparents. In contrast, similar experiences related to adult roles, as well as positive evaluations of these roles, may strengthen the grandparent-grandchild bond. Overall, there is a scarcity of research on

the association between grandchildren's adult roles and the grandparent-grandchild relationship. Also, in spite of providing a good foundation for future research, the few available studies offer mixed findings and have some limitations.

The grandchild's gender also plays an important role in the grandparent-grandchild relationship. The kin-keeping perspective and the social learning theory suggest that the same-gender parent may be a more salient role model for an offspring. That is, mother's changing intergenerational ties may be more influential for granddaughters' relationships with grandparents, while changes in father's relationships with the grandchild and grandparent generations may be more consequential for grandson's interactions with grandparents. Additionally, the transition to adulthood is gendered: males and females have different experiences related to adult roles. Consequently, the present research considers whether the association between grandchildren's adult roles and the grandparent-grandchild bond is different for grandsons and granddaughters. Previous studies have practically neglected the possibility that the grandchild's gender can moderate the association between parents' intergenerational ties or grandchildren's adult roles and the grandparent-grandchild bond. Furthermore, in attempt to better understand variations in the grandparent-grandchild relationships associated with parents' intergenerational ties and grandchildren's adult roles, the present research examines young adults' relationships with all available grandparents and therefore, takes into account grandparent's gender and lineage.

Drawing on grandchildren's reports of their relationships with grandparents, the present dissertation investigates young adults' relationships with their grandparents and focuses on two dimensions of intergenerational solidarity between adult grandchildren

and their grandparents – contact and closeness. Changes in young adults’ contact and closeness with grandparents are examined as well. More specifically, this dissertation centers on factors that facilitate a stronger grandparent-grandchild bond (i.e., other intergenerational relationships in the family) and influences that lead to changes in grandparent-grandchild interactions over time (i.e., grandchildren’s adult roles). Other intergenerational relationships in the family include each parent’s ties to their offspring, their own parents and their parents-in-law. This research takes into account grandchildren’s adult roles and role changes related to residential independence, school enrollment, full-time employment, marital status, and parenthood status.

This dissertation draws on data from the National Survey of Families and Households (NSFH). There are several advantages of using data from the NSFH that are important to this dissertation. The NSFH is a national probability sample. Findings of research based on these data can be generalized to the entire U.S. population. Additionally, the NSFH data provide a great opportunity to examine associations between various family structures, processes, and relationships. Further, the sample has an equal number of granddaughters and grandsons which facilitates subgroup comparisons. These data also allow differentiating between maternal and paternal grandparents as well as between grandmothers and grandfathers. Finally, these data have rarely been used in prior research on the associations between parents’ intergenerational relationships or grandchildren’s adult roles and the grandparent-grandchild bond.

Currently, data are available from three waves of the NSFH that were conducted in 1987-88, 1992-94, and 2001-2003, respectively (Sweet, Bumpass, & Call, 1988; Sweet & Bumpass, 1996, 2002). This dissertation predominantly draws on data from interviews

with focal children that were conducted at Waves 2 and 3. The age spread of the focal children is appropriate for studying the transition to adulthood. Namely, the age range of the focal children was 10-23 at Wave 2 and 18-34 at Wave 3. The focal children were selected at Wave 1. However, the focal children did not answer their own questions at Wave 1. More specifically, at Wave 1, primary respondents (i.e., parents of focal children) who had any biological, adopted, step (including partner's), or foster children under the age of 18 living in the household were asked a series of questions about one of these children – the “focal child.” This dissertation refers to focal children as young adults or grandchildren. Information on parents' intergenerational relationships and parents' sociodemographic characteristics was taken from interviews with primary respondents and their current spouses (i.e., grandchildren's parents).

This dissertation is written in a three paper format. Each of the following three chapters represents a self-standing paper. Drawing on the extant research, the first paper (Chapter 2) begins by considering the association between parents' intergenerational ties in the family and the grandparent-adult grandchild relationship and proceeds by examining whether changes in parents' relationships with the grandchild and grandparent generations are predictive of changes in the grandparent-grandchild relationship over time. The first paper also investigates the moderating effect of grandchild's gender on the association between parents' intergenerational ties and the grandparent-grandchild bond. This paper uses data from Wave 3 for the cross-sectional analysis and from Waves 2 and 3 for the longitudinal analysis. Compared to the sole focus on cross-sectional data in previous studies, the combination of the two types of data in one paper can help gain

better understanding of variations in the grandparent-grandchild bond that are contingent on parents' intergenerational ties.

The final sample in the first paper ($N = 619$) was restricted in two ways. First, it consisted only of the grandchildren who participated at both Waves 2 and 3. Grandchildren who participated only at Wave 3 were not included because information on their past relationships with grandparents and on their parents' past relationships with the grandparent and grandchild generations was not available for these grandchildren. Second, the sample was narrowed to those grandchildren who were biological children of the primary respondents and whose biological parents were still married to each other at Wave 3. This was done in order to ensure that a parent's parent or parent-in-law and the young adult's grandparent are the same person because the NSFH provides information on both parents' relationships with young adults and with each of their available parents and parents-in-law only for the married primary respondents and their current spouses. Consequently, the findings of the first paper cannot be generalized to other types of families (e.g., separated, divorced, widowed, remarried or never married families) because family processes in the latter families are different from those in families where offspring's biological parents are married to each other.

The second paper (Chapter 3) concentrates on how grandchildren's acquisition of adult roles influences the grandparent-grandchild bond. The second paper uses only cross-sectional data. Finally, the third paper (Chapter 4) takes a longitudinal look at the association between grandchildren's adult roles and the grandparent-grandchild relationship. In particular, the latter chapter investigates whether changes in grandchildren's adult roles (i.e., role entries and exits as well as the occupation of roles)

are linked to changes in grandparent-grandchild ties. These chapters also examine the moderating effect of grandchild's gender on the association between grandchildren's adult roles and the grandparent-grandchild bond.

As discussed above, due to data limitations in the NSFH, the sample in the first paper included only young adults whose biological parents were married to each other. The samples in the second and third papers, however, covered a broader set of family structures, because the latter papers focused on grandchildren's adult roles and did not take into account the web of family intergenerational relationships. Thus, the sample in the second paper included all the grandchildren who participated in focal child interviews at Wave 3. That is, the final sample ($N = 1,952$) consisted of the grandchildren who participated at both Waves 2 and 3 and of those grandchildren who participated only at Wave 3. The third paper used data from both Waves 2 and 3. The final sample ($N = 1,523$) in the third paper was restricted to the grandchildren who participated at both Wave 2 and 3 and did not include those grandchildren who were interviewed only at Wave 3 because information on their past relationships with grandparents was not available.

As mentioned earlier, prior research on the associations between grandchildren's adult roles and the grandparent-grandchild relationship is practically nonexistent. Also, the two available studies used longitudinal data (e.g., Crosnoe & Elder, 2002; Mills, 1999). The present dissertation contains two chapters on the associations between grandchildren's adult roles and the grandparent-grandchild relationship: one uses cross-sectional data, while the other draws on longitudinal data. Cross-sectional data help examine whether and how grandchildren's adult roles, regardless of when they have

acquired those roles, matter for the grandparent-grandchild relationship. However, longitudinal data are useful for illuminating whether and how grandchildren's transitions in and out of adult roles are associated with the grandparent-grandchild bond. Because of the paucity of research in this area, each of these issues deserves a separate examination (i.e., chapter).

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CHAPTER 2

PARENTS' INTERGENERATIONAL TIES AND THE GRANDPARENT-GRANDCHILD RELATIONSHIP

Introduction

Decreasing mortality has increased the opportunity for family members to spend more years in intergenerational roles, such as the roles of adult grandchild and grandparent with adult grandchildren (Harwood & Lin, 2000). The extended duration of intergenerational roles raises new issues related to the development and change of these relationships over time. In particular, it is important to examine factors that can help maintain stronger ties between different generations in the family over the life course. Each specific dyadic intergenerational relationship, for example, can be contingent on other intergenerational relationships in the family. And because relationships between family members change over the life course of individuals, other relationships that are dependent on them may change as well.

The grandparent-grandchild relationship is dynamic (Hodgson, 1998; Silverstein & Long, 1998; Williams & Nussbaum, 2001). The content and the meaning of the grandparent and grandchild roles change over the life course (Silverstein & Marengo, 2001). Relationships between grandchildren and their grandparents are especially likely to be renegotiated when grandchildren become young adults because young adulthood brings new priorities, goals, and responsibilities into grandchildren's lives (Hodgson, 1998). Young adults become more independent and their concerns shift from their family of origin to their family of procreation, career advancement, and relationships outside the family (Roberto & Stroes, 1992). At the same time, prior research demonstrates that

parents' intergenerational relationships are still relevant for grandchildren's relationships with their grandparents even when grandchildren become adults (e.g., Brown, 2003; Hodgson, 1992; Matthews & Sprey, 1985; Monserud, 2008; Thompson & Walker, 1987). However, parents' intergenerational ties to their offspring, their own parents, and their parents-in-law can also change over time because of various life course events in different generations (e.g., the transition to adulthood, health changes, financial circumstances, retirement, and a death of a family member). Yet, it remains uncertain whether possible changes in parents' relationships with the grandparent and grandchild generations can shape the development of the grandparent-adult grandchild bond over time. In other words, are grandparent-adult grandchild relationships sensitive to the dynamic nature of other intergenerational relationships in the family, in spite of the fact that compared to their younger counterparts, adult grandchildren are residentially independent from their parents, become less dependent on them, and gain more control over their relationships with grandparents?

It is essential to examine continuity and change in the grandparent-grandchild relationship for several reasons. Interpersonal relationships are important to the lives of individuals (Thornton, Orbuch, & Axinn, 1995). These relationships can have implications for people's behaviors, attitudes, and values, as well as for their overall well-being, including both physical and mental health. Relationships between family members can be particularly beneficial. Family members can provide each other with many different kinds of support. Moreover, interactions between different generations in the family provide individuals with a sense of continuity and stability. In general, prior research indicates that grandparents as well as adult grandchildren view their

relationships with each other as important and influential (Hodgson, 1992; Giarrusso, Feng, Silverstein, & Bengtson, 2001; Harwood & Lin, 2000; Langer, 1990).

The main goal of the present study is to examine whether changes in parents' contact and relationship quality with their own parents, their parents-in-law, and their children are associated with changes in contact and closeness between grandchildren and grandparents when grandchildren become young adults. Previous studies in this area also focused on the association between parents' intergenerational ties and one or both of these two aspects of the grandparent-grandchild relationship (i.e., contact and closeness). The current study, however, goes beyond prior research in four ways. First, after establishing the pattern of association between parents' intergenerational ties in the family and the grandparent-grandchild bond, this study draws on longitudinal data to help illuminate whether contact and closeness between young adults and their grandparents change in response to changes in other intergenerational relationships in the family. All previous research on the parental generation and its relationship to the grandparent-grandchild bond has been cross-sectional. Compared to longitudinal data, cross-sectional data may be less able to illuminate possible causal linkages between parents' intergenerational relationships in the family and the grandparent-grandchild bond. The associations between parents' intergenerational ties and the grandparent-grandchild relationship may be of reciprocal nature. Studies usually assume that parents mediate the grandparent-grandchild relationship, but it is also possible that grandparents serve as intermediaries between the parent and grandchild generations. Additionally, studies relying on cross-sectional data cannot rule out the possibility that other factors may affect intergenerational relationships between family members (e.g., life course transitions in

different generations). Second, this study assesses whether the grandchild's gender moderates the association between changes in parents' intergenerational relationships in the family and changes in young adults' ties to their grandparents, which has been practically neglected in prior research (for one exception see Monserud, 2008). Third, this study examines grandchildren's ties to each living grandparent and considers both parents' relationships with young adults, their own parents, and parents-in-law. As a result, this research contributes to a small but growing body of literature on the grandparent-adult grandchild bond that has considered within as well as across lineage intergenerational relationships in the family (e.g., Brown 2003; Matthews & Sprey, 1985; Monserud, 2008). Fourth, the present study draws on a nationally representative sample of young adults ages 18-34 from Waves 2 and 3 of the National Survey of Families and Households (NSFH) whereas the majority of previous studies in this area have been limited to convenience samples of college students (for exceptions see Hodgson, 1992 and Monserud, 2008).

Background

The extant literature on the grandparent-adult grandchild relationship has pointed to the dynamic nature of this relationship over the life course and recognized the importance of examining continuity and change in interactions between grandparents and grandchildren (e.g., Cherlin & Furstenberg, 1986; Crosnoe & Elder, 2002; Hodgson, 1992; Mills, 1999; Silverstein & Long, 1998; Silverstein & Marenco, 2001). Previous studies on the association between parents' intergenerational ties and the grandparent-grandchild bond, however, have relied on cross-sectional data. Nevertheless, prior research in this area points to other intergenerational relationships in the family as being a

key factor related to the grandparent-grandchild relationship. In particular, these studies found that parents' strong relationships with the grandparent and grandchild generations are related to better relationships between grandparents and adult grandchildren (e.g., Brown, 2003; Hodgson, 1992; Matthews & Sprey, 1985; Monserud, 2008; Thompson & Walker, 1987). Yet, it remains unknown whether changes in parents' intergenerational ties are associated with changes in the grandparent-adult grandchild relationship over time. Young adulthood is a changing time for grandchildren during which individuals acquire different adult roles and become more autonomous from their parents. Life course events that characterize young adulthood could make grandchildren less sensitive and less responsive to changes in family processes and as a result, the grandparent-grandchild relationship could become less contingent on dynamics in other intergenerational relationships.

The family systems theory provides a general framework for examining the association between other intergenerational relationships in the family and the grandparent-adult grandchild bond. According to this theory, each dyadic relationship between family members is embedded in a system of family ties and should be examined within a complete kinship network (Cox & Paley, 1997). Relationships between family members develop in the context of the family and change over the life course. The family systems theory suggests that because interpersonal relationships between family members are interrelated, changing intergenerational relationships within a larger family system can shape dynamics in a specific cross-generational dyad. Thus, changes in parents' relationships with the grandparent and grandchild generations can be influential

for the development of the grandparent-grandchild relationship even when grandchildren become young adults.

Whereas the family systems theory emphasizes general interdependence of relationships between family members, the parent-as-mediator theory and the kin-keeping perspective help identify specific mechanisms through which parents' intergenerational ties can matter for the grandparent-grandchild relationship. The parent-as-mediator theory maintains that parents influence the grandparent-grandchild relationship because they act as intermediaries between the grandparent and grandchild generations (Robertson, 1975). Parents socialize grandparents and grandchildren into their respective roles by setting examples and providing opportunities for grandparents and grandchildren to bond. Family members learn appropriate and desirable behaviors within the context of the family. For instance, observing parents as models and having a strong bond with them may encourage children to have close relationships with other family members, such as grandparents (Hill, Mullis, Readdick, & Walters, 2000). Overall, prior research that has examined whether parents' intergenerational ties are associated with the grandparent-adult grandchild relationship seems to support the parent-as-mediator theory (e.g., Brown, 2003; Hodgson, 1992; Matthews & Sprey, 1985; Monserud, 2008; Thompson & Walker, 1987).

The kin-keeping perspective is useful for examining whether mothers and fathers can have different effects on the grandparent-grandchild bond. According to the kin-keeping perspective, gender plays a central role in kinship relationships (Bahr, 1976; Rosenthal, 1985). Compared to men, women place greater importance on close emotional bonds with family members and are more actively involved in maintaining

kinship ties (DiLeonardo, 1987; Hagestad, 1986; Lye, 1996). And in most cases, women usually perform kin-keeping activities not only for their own kin but also for their husband's family (DiLeonardo, 1987; Hagestad, 1986). The kin-keeping perspective suggests, therefore, that women are more likely than men to help strengthen relationships between family members within and across lineage lines.

The extant research indicates, however, that not only mother's but also father's intergenerational relationships can make a difference in the grandparent-grandchild bond, at least within lineage lines. For example, several studies found that the mother's close ties to her offspring and her parents were associated with stronger relationships between young adults and maternal grandparents (e.g., Brown, 2003; Matthews & Sprey, 1985; Monserud, 2008; Thompson & Walker, 1987). Additionally, the few previous studies that considered each parent's intergenerational relationships demonstrated that young adults' closer relationships with paternal grandparents were contingent on the father's strong relationships with his children and his parents (Brown, 2003; Matthews & Sprey, 1985; Monserud, 2008).

At the same time, available studies that have assessed whether both parents' relationships with their parents-in-law have implications for the grandparent-grandchild relationship across lineage lines have yielded contradictory results (e.g., Brown, 2003; Fingerman, 2004; Matthews & Sprey, 1985; Monserud, 2008). Brown's (2003) research indicated that parents' relationships with their in-laws were not associated with college students' perceptions of their relationships with grandparents. On the other hand, studies by Matthews and Sprey (1985) and by Monserud (2008) suggest that mothers matter for young adults' ties to paternal grandparents. In the latter studies, college-age

grandchildren whose mother had stronger ties to her mother-in-law reported closer relationships with paternal grandmothers. In Fingerma's (2004) study, however, grandparents reported that, compared to their relationships with their own children, their relationships with their children-in-law were more consequential for their ties to grandchildren.

Nevertheless, no study to date has considered whether changes in the grandparent-grandchild bond over the life course are contingent on changes in each parent's relationships with young adults, their own parents, and their parents-in-law.

Accordingly, the present study starts by examining the associations between parents' intergenerational ties and the grandparent-grandchild bond and proceeds by investigating whether changes in each parent's intergenerational relationships have implications for changes in relationships between young adults and their grandparents when grandchildren transition into young adulthood. On the basis of theory and prior research, the following hypotheses are tested:

Hypothesis 1.1: Stronger mother-child ties will be associated with better relationships between young adults and their maternal grandmother/grandfather.

Hypothesis 1.2: Improvements in mother-child ties will be associated with improvements in relationships between young adults and their maternal grandmother/grandfather.

Hypothesis 2.1: Stronger father-child ties will be associated with better relationships between young adults and their paternal grandmother/grandfather.

Hypothesis 2.2: Improvements in father-child ties will be associated with improvements in relationships between young adults and their paternal grandmother/grandfather.

- Hypothesis 3.1: Stronger mother-maternal grandparent relationships will be associated with better relationships between young adults and this maternal grandparent.
- Hypothesis 3.2: Improvements in the mother-maternal grandparent relationship will be associated with improvements in relationships between young adults and this maternal grandparent.
- Hypothesis 4.1: Stronger father-paternal grandparent relationships will be associated with better relationships between young adults and this paternal grandparent.
- Hypothesis 4.2: Improvements in the father-paternal grandparent relationship will be associated with improvements in relationships between young adults and this paternal grandparent.
- Hypothesis 5.1: Stronger mother-parent-in-law relationships will be associated with better relationships between young adults and this paternal grandparent.
- Hypothesis 5.2: Improvements in the mother-parent-in-law relationship will be associated with improvements in relationships between young adults and this paternal grandparent.
- Hypothesis 6.1: Stronger father-parent-in-law relationships will be associated with improvements in relationships between young adults and this maternal grandparent.
- Hypothesis 6.2: Improvements in the father-parent-in-law relationship will be associated with improvements in relationships between young adults and this maternal grandparent.

“Improvements” in intergenerational ties imply that relationships between family members became closer or that contact between family members became more frequent over time.

Grandchild's Gender

The kin-keeping perspective suggests that the mother's relationships with her kin can have more influential consequences for her daughter's than for her son's relationships

with family members because the mother-daughter relationship occupies a special place in the family structure (Rosenthal, 1985; Rossi, 1995). The kin-keeping position is usually passed from mother to daughter and in general, there is greater continuity across female-linked generations in the family. In addition to the kin-keeping perspective, the social learning theory suggests that parents' intergenerational relationships may have a differential impact by grandchild gender. The social learning theory maintains that a same-gender parent is a stronger model for a child than an opposite-gender parent because children are more likely to imitate the attitudes, feelings, and behaviors that are considered to be culturally appropriate for their gender (Bussey & Bandura, 1984; Mischel, 1970). On the basis of the same-gender parent modeling effect one might predict that the effect of parent's intergenerational ties in the family can be stronger for the same-gender offspring.

Prior research on whether the association between parents' intergenerational ties in the family and the grandparent-grandchild bond varies for grandsons and granddaughters is practically non-existent. However, at least one available study (Monserud, 2008) that examined this issue found that the effect of the father-child relationship on young adults' closeness to paternal grandparents was stronger for grandsons than for granddaughters. The present study extends Monserud's (2008) research by investigating whether the grandchild's gender moderates the association not only between parents' relationships with their offspring and the grandparent-grandchild bond but also between parents' relationships with the grandparent generation within and across lineage lines and the grandparent-grandchild bond. In addition, the present study

looks at two dimensions of the grandparent-adult grandchild relationship – contact and closeness.

Both the kin-keeping framework and the same-gender parent modeling perspective motivate Hypotheses 7.1 and 7.2:

Hypothesis 7.1: The association between mother’s intergenerational relationships in the family and young adults’ closeness to, and contact with, grandparents is stronger for granddaughters than for grandsons.

Hypothesis 7.2: The association between changes in the mother’s intergenerational relationships in the family and changes in young adults’ closeness to, and contact with, grandparents is stronger for granddaughters than for grandsons.

The same-gender modeling perspective also suggests Hypotheses 8.1 and 8.2:

Hypothesis 8.1: The association between father’s intergenerational relationships in the family and young adults’ closeness to, and contact with, grandparents is stronger for grandsons than for granddaughters.

Hypothesis 8.2: The association between father’s intergenerational relationships in the family and young adults’ closeness to, and contact with, grandparents is stronger for grandsons than for granddaughters.

Additional Factors Related to the Grandparent-Grandchild Relationship

Several other factors may be associated with changes in contact and closeness between young adults and their grandparents when grandchildren become young adults. Grandchildren’s age is relevant for the examination of changes in the grandparent-grandchild bond over time. The age range of the study grandchildren is 18 - 34 years. Older grandchildren in the sample may be very different from younger ones because of the changes that the former have already experienced in their lives. Race can also matter for grandparent-grandchild ties. Some studies, for example, have found stronger ties

between grandparents and grandchildren in Black families than in non-Black families (e.g., Ashton, 1996; Lawton et al., 1994; Wiscott & Kopera-Frye, 2000). Young adults with higher levels of education and whose parents have higher socioeconomic status (i.e., higher levels of education) may have more resources and opportunities to interact with their grandparents. In addition, theories and prior research provide contradictory directions for the effect of grandchildren's adult roles on the grandparent-grandchild relationship, indicating that this relationship can either improve or deteriorate as a result of life course changes in grandchildren's lives (Mills, 1999; Crosnoe & Elder, 2002). The present study controls for such factors in grandchildren's lives as residential independence, enrollment in school, full-time job, marital status and parenthood status. Moreover, the presence of both grandparents of a given lineage can shape the grandparent-grandchild relationship. For example, because women are considered to be major kin-keepers in the family, the presence of grandmothers may strengthen relationships between grandchildren and grandfathers. Also, when both grandparents are alive, their financial circumstances may be better and as a result, they can have extra resources and opportunities for interactions with their grandchildren.

Method

Sample

This study draws on data from Waves 2 and 3 of the NSFH. The NSFH is based on a national probability sample, generalizable to the entire U.S. population (Sweet, Bumpass, & Call, 1988; Sweet & Bumpass, 1996, 2002). Wave 1 of the NSFH was conducted in 1987-88 and included interviews with a probability sample of 13,007 respondents. The sample consisted of a main cross-section of 9,637 households and

oversampling of minorities (i.e., African Americans, Puerto Ricans, Mexican Americans), one-parent families and families with stepchildren, cohabiting couples and recently married persons. The target population represented the non-institutional United States population age 19 and older (Sweet & Bumpass, 1996; Sweet et al., 1988).

At Wave 1 of the NSFH, respondents who had any biological, adopted, step (including partner's), or foster children under the age of 18 living in the household were also asked a series of questions about one of these children – the “focal child.” This child was selected if his/her name came first after all the names of the children in the household were listed alphabetically. There were two groups of focal children depending on their age (i.e., age 5-11 or 12-18; $N = 3,808$). The present study will refer to focal children as young adults or grandchildren.

Wave 2 was conducted 5 years later, in 1992-94, and included a telephone interview with the same children who were focal children at Wave 1. Of the original focal children at Wave 1, 2,505 children (66%) participated at Wave 2. These children fell within one of two age groups. Telephone interviews were conducted with focal children ages 18-23 ($N = 1,090$). Shorter telephone interviews were conducted with focal children ages 10-17 ($N = 1,415$).

At Wave 3 of the NSFH which was conducted in 2001-2003, interviews were attempted with focal children who were age 18 and older at the time of Wave 3 ($N = 1,952$), regardless of whether or not an interview was completed during Wave 2 of the NSFH. Specifically, interviews at Wave 3 were completed with 869 younger focal children from Wave 2, with 654 older focal children from Wave 2, and 429 new focal children who had not completed interviews at Wave 2. That is, only 1,523 focal children

at Wave 3 were the focal children who also participated at Wave 2. Compared to those who dropped out before Wave 3, the focal children who participated in Waves 2 and 3 were more likely to be White, female, to have biological parents who were married to each other, and to report closer relationships with paternal grandfathers, but not other grandparents.

Because information was not available on their past relationships with grandparents as well as on their parents' past relationships with the grandparent and the grandchild generations, the 429 new focal children introduced in Wave 3 were not included in the analysis. In addition, there were further restrictions placed on the analysis sample because the availability of measures for intergenerational relationships varied across focal children. Specifically, the NSFH provides information on both parents' relationships with young adults and with each of their available parents and parents-in-law only for the married primary respondents and their current spouses. Therefore, in order to ensure that a parent's parent or parent-in-law and the young adult's grandparent are the same person, I restricted the sample to those young adults who were biological children of primary respondents and whose biological parents were still married to each other at Wave 3. An additional 168 young adults (11%) whose parents did not participate at Wave 3 were excluded from the analysis because they lacked information on the marital status of their parents and on parents' relationships with the grandparent and grandchild generations. After applying the above restrictions, the final sample consists of 619 young adults whose biological parents were still married to each other at Wave 3. The final sample includes 368 younger focal children (59%) and 251 older focal children (41%). Grandchildren in the final sample were ages 10 - 26 at Wave 2 and 18 - 34 at

Wave 3. All measures of intergenerational ties were available for the final sample. In comparison to the other grandchildren who participated in Waves 2 and 3, the young adults selected for the present study were more likely to be White and to feel less close to their maternal grandmothers, but did not differ on other study measures.

Weights

Sampling weights are available for the NSFH data because of the complex survey design. Unstandardized coefficients were compared for weighted and unweighted data. The results showed some differences: the coefficients were similar, but due to loss of power in the unweighted analysis, some were not statistically significant. This paper presents weighted estimates.

Measures

All measures were taken from Waves 2 and 3 of the NSFH, with the exception of race/ethnicity that came from Wave 1. The cross-sectional analysis draws on data from Wave 3, whereas the longitudinal analysis is based on data from Waves 2 and 3.

Dependent Variables

Contact with grandparents. The contact variables measure grandchildren's contact with maternal grandparents and paternal grandparents, each as a couple. *Contact with maternal grandparents* and *contact with paternal grandparents* reflect young adults' responses to two similar questions in Wave 3, "During the last year, about how often did you see, talk on the telephone, or receive a letter or e-mail from your grandmother/grandfather/grandparents on your mother's side/on your father's side?" Change score measures of contact with maternal and paternal grandparents were created by comparing young adults' responses to contact questions with their grandparents at

Waves 2 and 3. More specifically, change score measures were calculated by subtracting values for contact at Wave 2 from values for contact at Wave 3.

The wording of and the number of response categories for the contact questions varied for different groups of grandchildren, however, necessitating some recoding. Younger grandchildren at Wave 2 were asked two questions about contact with their grandparents: 1) about communication with grandparents, “During the last year, about how often did you talk on the telephone or receive a letter from your grandmother/grandfather/grandparents on your mother’s/father’s side?”, and 2) about visits with grandparents, “During the last year, how often did you see your grandmother/grandfather/grandparents on your mother’s/father’s side?” Responses to these two questions on communication/visits with grandparents at Wave 2 for younger grandchildren were averaged to create a single measure of contact with grandparents of a given lineage.

Response categories for contact questions ranged from 1 = *not at all* to 6 = *more than once a week* at Wave 2 for younger grandchildren and at Wave 3 for all grandchildren. However, response categories for contact questions ranged from 1 = *not at all* to 5 = *more than once a week* at Wave 2 for older grandchildren. The response categories for the contact questions for younger grandchildren at Wave 2 and for all grandchildren at Wave 3 were recoded in order to range from 1 = *not at all* to 5 = *more than once a week*. Specifically, categories 2 = *about once a year* and 3 = *several times a year* were collapsed into 2 = *less than once a month*.

I explored the potential impact of differences in the measurement of contact with grandparents between younger and older grandchildren in the sample. I ran exploratory

models that included a dummy variable for older grandchildren. The results for the dummy variable were not significant. In addition, I ran separate models for younger and older grandchildren. The results were the same.

Closeness to grandparents. Closeness to each grandparent at Wave 3 reflects young adults' responses to the question, "How would you describe your relationship with this grandparent?" Responses ranged from 0 = *not at all close* to 10 = *extremely close*. Because grandchildren reported on their relationships with none to four grandparents, depending on the number who were still alive, relationships with each grandparent were considered in turn. Change scores were also created for grandchildren's closeness to each available grandparent by comparing young adults' responses to the same question at Waves 2 and 3.

Independent Variables

Parent-child contact. Measures of the *mother-child contact* and *father-child contact* are constructed on the basis of young adults' responses to two questions that asked about the frequency of their visits and communication with each of their parents over the last 3 months. Response categories for these questions ranged from 1 = *not at all* to 5 = *more than once a week*. Young adults' responses to these two questions were averaged to create a single measure of contact with each parent. Change scores between Waves 2 and 3 were created from these averages.

Parent-child relationships. Unlike other measures of intergenerational relationships used in this study, measures of young adults' relationship quality with their parents were available from the perspective of young adults as well as their parents. In order to minimize same-reporter bias, composite measures of the parent-child

relationship were created. As a result, the measures of the *mother-child relationship* and the *father-child relationship* and the measures of *changes* in the mother-child relationship and the father-child relationship reflected the perspectives of both generations (i.e., young adults and parents). These measures were created by averaging the parent's and young adult's responses to similar questions within each Wave, "Taking things all together, on a scale from 0 to 10, where 0 is really bad and 10 is absolutely perfect, how would you describe your relationship with your mother/father or with the focal child?" Change scores between Waves 2 and 3 were created from these averages.

Parents' relationships with the grandparent generation. The variables capturing parents' relationship quality with their own parents and their parents-in-law were constructed from the interviews with the primary respondents and their current spouses (i.e., young adults' parents). Parents ranked their relationships with a specific grandparent on a scale from 0 to 10 (0 = *really bad*, 10 = *absolutely perfect*). Four variables were used in the analyses to measure the relationship between each parent and his or her own parent: *mother-grandmother relationship*, *mother-grandfather relationship*, *father-grandmother relationship*, and *father-grandfather relationship*. Similarly, four measures of the relationship between each parent and his or her parent-in-law were included in the analysis: *mother-mother-in-law relationship*, *mother-father-in-law relationship*, *father-mother-in-law relationship*, and *father-father-in-law relationship*. For each relationship, change scores were also created, measuring changes in parents' relationships with the specific grandparent between Waves 2 and 3. Because of sample size limitations, models predicting closeness to each grandparent included only measures of the parent's relationship with the relevant grandparent. To include a parent's

relationship with other grandparents in modeling the relationship to a specific grandparent would have required all four grandparents to be alive. Moreover, measures of parents' relationships with the grandparent generation are excluded from models for contact with grandparents in order to maximize the number of cases in these models. Unlike measures of parents' relationships with the grandparent generation, measures of young adults' contact with grandparents were at the couple level, regardless if only one member of the couple was living. Including measures of relationship quality with both members of the couple reduces the sample size to include only those grandparents for whom both members of the lineage were alive and for whom parents reported on relationship quality. It should be also noted that because of more than 50% of missing cases on some of the measures of parents' contact with the grandparent generation, only measures of parents' contact with young adults are included in the models.

Granddaughter measures grandchild's gender. This measure was taken from Wave 3. It is coded 0 for *male* and 1 for *female*.

Control Variables

A number of demographic and other control variables were also included in the analysis. *Grandchild's age* was taken from Wave 3 and is measured in years. As no item regarding race or ethnicity was asked of the young adults or their parents at Waves 2 or 3, race/ethnicity of the parent was taken from the interviews with the primary respondents (i.e., a parent) at Wave 1 and used as a proxy measure of grandchild's race. Preliminary analyses showed that there were significant differences in young adults' contact with, and feelings of closeness to, maternal and paternal grandmothers between Whites and other racial or ethnic groups. Therefore, *White* was a dichotomous variable (0 = *no*, 1 = *yes*).

Grandchild's education comes from Wave 3 and reflects years of education completed. *Mother's education* and *father's education* similarly reflect years of education completed by each parent.

In the cross-sectional analysis, five measures of grandchildren's adult roles were based on young adults' responses to relevant questions at Wave 3. *Separate residence* measures whether young adults had moved out of their parents' place (0 = *no*, 1 = *yes*). *Enrollment in school* captures whether grandchildren were enrolled in any kind of educational institution beyond high school (i.e., a vocational, technical, or trade school; a two-year, junior, or community college; four-year college or university; professional or graduate school; and a business college or secretarial/nursing school), coded 0 for *no* and 1 for *yes*. *Full-time job* captures whether young adults were employed full-time (0 = *no*, 1 = *yes*). Full-time is defined as 30 hours or more per week. *Married* measures whether grandchildren were currently married (0 = *no*, 1 = *yes*). *Parent* measures whether young adults had children (0 = *no*, 1 = *yes*).

In the longitudinal analysis, five measures reflecting grandchildren's transitions into relevant adult roles between Waves 2 and 3 were constructed by comparing young adults' responses to similar questions at the time of the two interviews. Because younger focal children at Wave 2 were not asked questions about their marital status, parenthood status, and employment, measures of changes in these adult roles for this group of grandchildren were based on relevant history questions at Wave 3. *Started living alone between waves* reflects whether young adults stopped living with their parents between Waves 2 and 3 (0 = *no*, 1 = *yes*). *Enrolled in school between waves* measures whether young adults enrolled in any kind of educational institution beyond high school between

Waves 2 and 3 (0 = no, 1 = yes). *Started working full-time between waves* reflects whether young adults started a full-time job between waves (0 = no, 1 = yes). Changes in grandchildren's marital status were measured by a dichotomous variable '*got married between waves*' (0 = no, 1 = yes). Changes in grandchildren's parenthood status were measured by a dichotomous variable '*became a parent between waves*' (0 = no, 1 = yes). In order to examine whether it matters if both grandparents of a given lineage were still alive, *both maternal grandparents alive* and *both paternal grandparents alive* were constructed on the basis of grandchildren's reports at Wave 3 (0 = no, 1 = yes).

Missing Data

Missing values on all independent and control variables were imputed using the 'ice' command in the STATA program for multiple imputations for missing data. 'Ice' imputes missing values by using switching regression, an iterative multivariate regression technique. The proportion of missing values across study variables ranged from no missing data to 8.6%. The variable requiring the most imputed values were the measure of the father-child relationship. To ensure that imputed values did not bias results, other methods of accounting for missing values such as mean substitution and listwise deletion were conducted as well. The latter methods produced similar results.

Analysis

Bivariate analyses were facilitated by conducting zero-order correlations. The results are presented in Table 2.1 (p. 56) for the cross-sectional analysis and Table 2.2 (p. 60) for the longitudinal analysis. Mother-child contact and father-child contact were highly correlated ($r = .77, p \leq .001$). The same was true for changes in young adults' contact with each parent ($r = .79, p \leq .001$). I decided, therefore, to examine whether

young adults' contact with their parents matters for their contact with, and closeness to, grandparents in three steps. First, I tested this association within lineage lines. That is, I included only measures of young adults' contact with their mothers in models for maternal grandparents and those of young adults' contact with their fathers in models for paternal grandparents. Second, I examined whether the parent-child contact is consequential for the grandparent-grandchild relationship across lineage lines. In separate models, I included only measures of the father-child contact in models for maternal grandparents and those of the mother-child contact in models for paternal grandparents. In the latter case, only statistically significant results are presented in Tables 5 - 10. Third, I assessed whether the association between the parents' intergenerational relationships and grandparent-grandchild ties varied by the gender of the grandchild (only statistically significant results are presented in Tables 5 - 10). Recall that due to the limitations of the data, measures of parents' relationships with their parents and parents-in-law are not used in models predicting young adults' contact with grandparents. The zero-order correlations confirmed that the rest of correlations among the independent variables and control variables considered in the same regression model did not exceed .60.

In addition to zero-order correlations, I conducted Variance Inflation Factor (VIF) diagnostics in order to examine whether any two independent and control variables operated similarly in their effects on dependent variables (the results are not shown). All the VIFs were lower than 2.2. In other words, there was no high multicollinearity between independent and control variables.

Models predicting contact with grandparents as a couple and closeness between grandchildren and each living grandparent were estimated separately using Ordinary Least Squares Regression (OLS). The sample size in the OLS models varied reflecting the number of respondents with each type of grandparent(s) still living. The analysis proceeds in two steps. First, the cross-sectional analysis was conducted. Second, the change score method was used for analyzing whether changes in intergenerational relationships in the family matter for changes in contact and closeness between young adults and their grandparents over time. The change score method (CS) was used rather than the lagged dependent variable (LDV) technique because the CS analysis has several advantages over the LDV regression. Johnson (2005) argues that CS is a better method for analyzing the effect of transitions on a dependent variable when using two waves of panel data because CS yields estimates unbiased by measurement error in the dependent variables. Moreover, the CS approach controls for unmeasured background variables that might have implications for the initial level of the dependent variable and the transition (Johnson, 2005).

Results

Descriptive Statistics

Descriptive statistics are presented in Table 2.3 (p. 66) for the cross-sectional sample and in Table 2.4 (p. 70) for the longitudinal sample. There was an equal number of granddaughters and grandsons with a mean age of 26. The majority of young adults were White (91%). As can be seen from Table 2.3, young adults answered questions on contact with 412 maternal grandparents (67%) and 360 paternal grandparents (58%). Young adults rated closeness to 354 maternal grandmothers (57%), 219 maternal

grandfathers (35%), 316 paternal grandmothers (51%), and 177 paternal grandfathers (29%). Overall, young adults had more frequent contact with, and felt closer to, their maternal grandparents than their paternal grandparents. Within lineage lines, grandchildren had closer ties with their grandmothers than with their grandfathers. As can be seen from Table 2.4, variables measuring changes in contact with, and closeness to, maternal and paternal grandparents have smaller sample sizes because young adults had not answered questions at Wave 2 about some of the grandparents about whom they reported at Wave 3. Missing cases on dependent variables were not imputed. As a result, there are 11 fewer cases for contact with maternal grandparents (2.6%), 11 for contact with paternal grandparents (3%), 6 for closeness to maternal grandmothers (1.7%), 6 for closeness to maternal grandfathers (2.7%), 9 for closeness to paternal grandmothers (2.8%), and 8 for closeness to paternal grandfathers (4.5%).

Means and standard deviations with t-tests for all study variables separately for grandsons and granddaughters are presented in Tables 2.3(A) (p. 68) and 2.4(A) (p. 72) for cross-sectional and longitudinal samples, respectively. T-tests indicated that mean differences between grandsons and granddaughters for some measures of intergenerational relationships at Wave 3 were statistically significant (Table 2.3(A)). Compared to grandsons, granddaughters had more contact with their maternal grandparents, closer relationships with their maternal grandmothers, more contact with their mothers, better relationships with their mothers. Additionally, granddaughters' mothers had better relationships with their own mothers and with their mothers-in-law than did grandsons' mothers. On the other hand, grandsons had more contact with their fathers and felt closer to their paternal grandfathers. As can be seen from Table 2.4(A),

granddaughters experienced greater decreases in closeness to paternal grandfathers and in contact with fathers between Waves 2 and 3 than did grandsons.

There was a large change over 7 - 10 years between Waves 2 and 3 in the average contact and closeness between grandchildren and their grandparents as well as in parents' relationships with the grandparent and grandchild generations (Table 2.4(B), p. 74).

Young adults perceived that their relationships with grandparents were more likely to deteriorate than improve between waves. The same was true for young adults' contact and relationship quality with their parents. On the other hand, except for the mother-grandmother relationship, ties between parents and the grandparent generation were more likely to improve than deteriorate over time.

Regression Results

Contact

Cross-sectional analysis. The cross-sectional results for contact with maternal grandparents and for contact with paternal grandparents at Wave 3 are presented in Table 2.5 (Model 1 for maternal grandparents, Model 2 for paternal grandparents, and Model 3 for paternal grandparents with mother-child contact instead of father-child contact; p. 75). Recall that in order to maximize the number of cases available for examining contact, which was not measured for each grandparent individually, the only measures of intergenerational relationship used in the analysis were measures of contact and relationship quality between young adults and their parents.

The results indicate that young adults who reported more frequent contact with their mothers also had more frequent contact with their maternal ($\beta = .09, p \leq .10$) and paternal grandparents ($\beta = .21, p \leq .001$). In addition, young adults who had frequent

contact with their fathers perceived more frequent contact with their paternal grandparents ($\beta = .22, p \leq .001$). The father-child contact was not predictive of young adults' contact with maternal grandparents, however (the results are not shown). As can be seen from Model 2, the interaction term between the mother-child relationship and the grandchild's gender indicates that stronger mother-child bond was associated with more frequent contact with paternal grandparents for granddaughters and with less frequent contact for grandsons. Relationships quality between young adults and their fathers was not related to contact with grandparents.

Longitudinal analysis. The results for changes in young adults' contact with grandparents between Waves 2 and 3 are presented in Table 2.6 (Model 1 for maternal grandparents and Model 2 for paternal grandparents; p. 76). Changes in young adults' contact with their parents were not predictive of changes in their contact with grandparents. Changes in relationship quality between young adults and their mothers were related to changes in contact with maternal grandparents, but not in the hypothesized direction. Specifically, improvements in the mother-child relationship were associated with a decrease in contact between young adults and their maternal grandparents over time ($\beta = -.11, p \leq .05$). Changes in the mother-child relationship did not predict changes in contact with paternal grandparents, however. In addition, changes in the father-child bond were not salient for changes in contact with maternal or paternal grandparents. None of the interaction terms between changes in young adults' contact and relationship quality with their parents and the grandchild's gender were statistically significant.

Closeness

Maternal grandparents: cross-sectional analysis. Table 2.7 presents the cross-sectional results for closeness to maternal grandparents (Model 1 for grandmothers, Model 2 for grandfathers, and Model 3 for grandfathers with father-child contact instead of mother-child contact; p. 77). Young adults' contact with mothers was associated with closeness to both maternal grandparents. Young adults who reported more frequent contact with their mothers felt closer to their maternal grandmothers ($\beta = .20, p \leq .001$) and grandfathers ($\beta = .16, p \leq .05$). The father-child contact was only predictive of closeness to maternal grandfathers and only for granddaughters. Unlike grandsons, granddaughters who had frequent contact with their fathers had closer relationships with their maternal grandfathers.

Relationship quality between young adults and their parents also predicted closeness to maternal grandparents. Better relationships between young adults and their mothers were associated with closer relationships between young adults and their maternal grandmothers ($\beta = .09, p \leq .10$) and grandfathers ($\beta = .13, p \leq .10$). At the same time, interaction terms revealed that grandchild gender moderated the association between the father-child relationships and young adults' closeness to maternal grandmothers and grandfathers. Specifically, better relationship quality between young adults and their fathers was predictive of closer relationships with maternal grandmothers and grandfathers for granddaughters. However, grandsons who had better relationships with their fathers felt less close to their maternal grandmothers.

The statistically significant interaction term of the mother-grandmother relationship and the grandchild's gender indicates that strong mother-grandmother ties

were positively associated with closeness to maternal grandmothers only for granddaughters. On the other hand, the mother-grandfather relationship was predictive of closeness to maternal grandfathers for grandchildren of both genders. Young adults whose mother reported better relationships with her father felt closer to their maternal grandfathers ($\beta = .26, p \leq .001$). Young adults' relationships with their maternal grandparents were also contingent on the father's relationships with his in-laws. Young adults whose father reported better relationships with his mother-in-law felt closer to their maternal grandmothers ($\beta = .35, p \leq .001$). However, tests of interactions terms demonstrated that stronger father-father-in-law relationships were significantly positively related to closer relationships with maternal grandfathers only for grandsons.

Maternal grandparents: longitudinal analysis. The results for changes in young adults' closeness to maternal grandparents between Waves 2 and 3 are presented in Table 2.8 (Model 1 for grandmothers, Model 2 for grandfathers, and Models 3 for grandfathers with father-child contact instead of mother-child contact; p. 78). Tests of interaction terms indicated that improvements in contact between young adults and their mothers were associated with increases in closeness to maternal grandmothers only for granddaughters. Changes in the mother-child contact were not predictive of changes in young adults' closeness to maternal grandfathers. At the same time, tests of the significance of interaction terms indicated that there were gender differentials in the association between changes in the father-child contact and changes in closeness to maternal grandfathers. Increases in contact between young adults and their fathers were related to decreases in closeness to maternal grandfathers for grandsons but to increases for granddaughters.

Improvements in the mother-child relationship were related to increases in closeness only with maternal grandmothers and only for granddaughters. Changes in the father-child relationships, however, were predictive of changes in closeness to both maternal grandparents. Young adults who experienced improvements in their relationships with fathers also reported increases in closeness to maternal grandmothers ($\beta = .12, p \leq .05$) and grandfathers ($\beta = .15, p \leq .05$).

Changes in the mother's relationships with her mother did not predict closeness to maternal grandmothers. On the other hand, improvements in the mother's relationships with her father were associated with increases in young adults' closeness to maternal grandfathers ($\beta = .11, p \leq .10$). Additionally, improvements in the father-mother-in-law relationship and in the father-father-in-law relationship were related to increases in closeness between young adults and their maternal grandmothers ($\beta = .18, p \leq .001$) and grandfathers ($\beta = .13, p \leq .05$), respectively.

Paternal Grandparents: cross-sectional analysis. The cross-sectional results for closeness to paternal grandparents are presented in Table 2.9 (Model 1 for grandmothers and Model 2 for grandfathers; p. 79). Tests of interaction terms revealed that stronger father-child relationships were related to greater closeness to paternal grandmothers only for granddaughters. However, the father-child contact was not predictive of closeness to paternal grandfathers. The same was true for the mother-child contact (the results are not shown). Additionally, relationship quality between young adults and their parents were not associated with closeness to paternal grandparents.

The fathers' relationships with parents were found to be predictive of closeness to paternal grandparents. Young adults whose father reported better relationships with his

own mother felt closer to their paternal grandmothers ($\beta = .19, p \leq .01$). However, a stronger father-grandfather bond was related to closer relationships with paternal grandfathers only for granddaughters. Young adults' closeness to paternal grandparents was also contingent on the mother's relationships with her in-laws. Young adults whose mother had strong ties to her mother-in-law reported closer relationships with their paternal grandmother ($\beta = .26, p \leq .001$). Additionally, young adults whose mother reported stronger relationships with her father-in-law felt closer to their paternal grandfathers ($\beta = .35, p \leq .001$).

Paternal grandparents: longitudinal analysis. The results for changes in closeness to paternal grandparents between Waves 2 and 3 are presented in Table 2.10 (Model 1 for grandmothers and Model 2 for grandfathers; p. 80). Changes in the father-child contact were not associated with closeness to paternal grandparents. The same was true for changes in the mother-child contact (the results are not shown). On the other hand, changes in parent-child relationships were predictive of changes in closeness to paternal grandparents. Tests of interaction terms indicated that changes in the mother-child relationship were related to changes in closeness to paternal grandmothers only for grandsons and not in the hypothesized direction. Specifically, improvements in the mother-child relationship were associated with decreases in closeness to paternal grandmothers for grandsons. At the same time, young adults of both genders who experienced improvements in their relationships with fathers reported increases in closeness to paternal grandfathers ($\beta = .14, p \leq .10$).

Changes in the father's relationships with his parents were associated with changes in closeness to paternal grandparents over time. Particularly, improvements in

the father-grandmother relationship and in the father-grandfather relationship were predictive of increases in closeness to paternal grandmothers ($\beta = .10, p \leq .10$) and grandfathers ($\beta = .19, p \leq .01$), respectively. Additionally, changes in the mother's relationships with her in-laws were related to changes in closeness to their paternal grandparents. Increases in closeness between young adults and their paternal grandmothers were contingent on improvements in the mother-mother-in-law relationship ($\beta = .13, p \leq .05$). Young adults also perceived increases in closeness to their paternal grandmothers if there was an improvement in the mother-father-in-law relationship over time ($\beta = .23, p \leq .001$).

Discussion

The extant research has documented that parents' intergenerational relationships in the family matter for the grandparent-grandchild bond, even when grandchildren become adults (Brown, 2003; Hodgson, 1992; Matthews & Sprey, 1985; Monserud, 2008; Thompson & Walker, 1987). However, none of the previous studies in this area have examined whether grandparent-grandchild relationships are also sensitive to changes in parents' ties to the grandparent and grandchild generations over time. In addition, prior research has practically neglected whether the grandchild's gender moderates the association between parents' intergenerational relationships in the family and grandparent-grandchild interactions (for one exception see Monserud; 2008). The present study investigates not only whether both parents' ties to their adult offspring, their own parents, and parents-in-law are associated with young adults' interactions with their grandparents, but also whether changes in both parents' intergenerational relationships in the family are related to changes in the grandparent-grandchild bond.

Overall, consistent with the family systems theory, findings of the present study demonstrate that it is necessary to consider the grandparent-grandchild relationship within a complete kinship network in order to better understand family dynamics in general and the development of this relationship in particular. Specifically, the results indicate that each parent's intergenerational relationships as well as changes in these relationships are associated with the grandparent-grandchild bond even when grandchildren reach adulthood and become more independent of their families of origin. As discussed below, these findings support the parent-as-mediator theory, the kin-keeping framework, as well as the idea that not only mothers but also fathers matter for intergenerational relationships in the family. Summaries of findings for the cross-sectional analysis and for the longitudinal analysis are presented in Tables 2.11 (p. 81) and 2.12 (p. 82), respectively. In addition, summaries of whether the hypotheses were supported are presented in Table 2.13 (p. 83) for the cross-sectional sample and in Table 2.14 (p. 85) for the longitudinal sample.

Contact with Grandparents

The findings provide support for the idea that young adults' contact with each parent matters for grandparent-grandchild contact within lineage lines. In accord with the kin-keeping perspective, mother-child contact was positively associated with young adults' contact with maternal grandparents. In support of the contention that fathers can also be kin-keepers in the family, father-child contact was positively related to contact with paternal grandparents. Additionally, consistent with the kin-keeping perspective, the findings suggest that mothers' through their contact with young adults can influence grandparent-grandchild contact across lineage lines. Namely, more frequent mother-

child contact was associated with more frequent contact between young adults and their paternal grandparents. However, changes in young adults' contact with their parents were not predictive of changes in the grandparent-grandchild contact over time within or across lineage lines.

Little support was found for the idea that young adults' contact with grandparents may be contingent on parent-child relationships. In the cross-sectional analysis, young adults' relationships with their mothers were predictive of contact only to paternal grandparents. There were also gender differentials in this association. Consistent with the kin-keeping perspective and the same-parent modeling effect, stronger mother-child relationships were associated with more frequent contact to paternal grandparents for granddaughters. On the other hand, stronger mother-child relationships were related to less frequent contact for grandsons. In the longitudinal analysis, changes in the mother-child relationship were associated with changes in contact with maternal grandparents, though not in the expected direction. Young adults who experienced improvements in their relationships with mothers perceived decreases in contact with their maternal grandparents over time. One possible explanation for the finding of a negative effect of young adults' contact with their mothers is that young adults' strong relationships with mothers can serve as a "substitute" for their relationships with paternal grandparents for grandsons and for maternal grandparents for grandchildren of both genders and vice versa. In other words, improved mother-child relationships may provide young adults with essential communication that they would look for, otherwise, in their interactions with their grandparents. Alternatively, the results suggest that deteriorating relationships with the mother foster more contact between young adults and their grandparents. In this

case, grandparents may provide grandchildren with necessary support that young adults lack in their relationships with mothers.

In general, it is possible that contact is contingent less on intergenerational relationships in the family and more on geographic proximity between grandparents and adult grandchildren. The present study did not control for distance between grandparents and grandchildren because this information is not available in the NSFH. The results for contact with grandparents should be considered in light of another data limitation which warrants caution. In order to maximize the sample size in models, I was unable to consider whether parents' contact and relationship quality with the grandparent generation were associated with grandchildren's contact with grandparents.

Closeness to Grandparents

Parent-Child Contact and Relationship Quality

Grandparent-grandchild bond within lineage lines. The findings for the associations between young adults' contact with their parents and grandchildren's closeness to their grandparents within lineage lines provide support for the kin-keeping perspective. More frequent contact between young adults and their mothers was predictive of closer relationships between grandchildren and maternal grandparents. Additionally, consistent with the kin-keeping perspective and the same-gender parent modeling effect, improvements in mother-child contact were associated with increases in closeness to maternal grandmothers only for granddaughters. However, no support was found for the idea that fathers can matter through their contact with the offspring for young adults' closeness to paternal grandparents.

Strong evidence was found for the argument that both parents' relationship quality with young adults matter for grandparent-grandchild closeness within lineage lines. In support of the kin-keeping perspective, the mother-child relationship was predictive of young adults' closeness to both maternal grandparents. In accord with the idea that fathers can also matter for intergenerational ties in the family, the father-child relationship was associated with granddaughters' closeness to paternal grandmothers. Overall, these findings are consistent with Brown's (2003) and Monserud's (2008) who similarly found linkages between the parent-child bond and grandparent-grandchild ties within lineage lines. In the longitudinal analysis, in support of the kin-keeping perspective and the same-gender parent modeling effect, positive changes in the mother-child relationship were related to increases in closeness to maternal grandmothers for granddaughters. In addition, improvements in the father-child relationship were associated with increases in closeness between young adults and their paternal grandfathers. The latter finding suggests that not only mothers, but also fathers can strengthen intergenerational solidarity between family members.

Grandparent-grandchild bond across lineage lines. Although not hypothesized, the findings of the present study also indicate that each parent's contact and relationship quality with young adults can be related to the grandparent-grandchild relationship across lineage lines. Specifically, in cross-sectional analysis, stronger father-child relationships were associated with closer relationships between maternal grandparents and granddaughters, but with less close relationships between maternal grandmothers and grandsons. More frequent father-child contact was related to closer relationships with maternal grandfathers for granddaughters. In the longitudinal analysis, improvements in

the father-child relationship were predictive of increases in closeness to both maternal grandparents. Additionally, positive changes in the mother-child relationship were associated with decreases in closeness to paternal grandmothers for grandsons. Moreover, improvements in father-child contact were related to increases in closeness between maternal grandfathers and granddaughters. At the same time, improvements in the father-child contact were predictive of decreases in closeness between maternal grandfathers and grandsons.

The findings for the associations between parent-child ties and the grandparent-grandchild relationship across lineage lines suggest that a strong father-child bond can have differential effects on the grandparent-grandchild relationships for grandsons and granddaughters. It seems that daughters imitate not only mothers' but also fathers' positive relationships with other family members. These results contradict the social learning theory which states that children are more likely to model the behavior of the same-gender parent than the opposite-gender parent. These findings, however, are in accord with the kin-keeping perspective, which suggests that females are more interested in maintaining strong kinship relationships. In addition, another explanation can be offered for the positive association between father-offspring contact and granddaughters' closeness to maternal grandfathers. It is possible, for instance, that granddaughters who spend more time with their fathers are more likely to be knowledgeable of a male point of view on different issues. Hence, more frequent father-daughter interactions can facilitate granddaughters' better understanding of their maternal grandfathers. On the other hand, close father-son relationships may serve as a substitute for close relationships between grandsons and maternal grandparents. Put it another way, grandsons' ties to their fathers

may provide them with essential closeness that they would look for in their relationships with maternal grandfathers if they could not get it from their fathers.

The results of the present study contradict those of Brown (2003) who did not find that parent-child relationships were predictive of the grandparent-grandchild bond across lineage lines. On the other hand, the findings of the current research are similar to Monserud's study (2008) which found that the father-child relationship was associated with college-age grandchildren's closeness to maternal grandfathers. One possible explanation for the discrepancies between Brown's (2003) study and the current research can be related to the wider age range of the present study's grandchildren. Specifically, grandchildren in the current study were ages 18-34 at Wave 3 and ages 10-26 at Wave 2, whereas Brown (2003) examined perceptions of college students. Parent-child relationships may be less significant for younger grandchildren's relationships with their grandparents across lineage lines. Older grandchildren may be more aware of interpersonal relationships in the family, particularly family processes across lineage lines. In general, whereas younger grandchildren strive for becoming autonomous from their parents, older grandchildren who have already established their independence feel less threatened by the influence of intergenerational ties in the family.

Parents' Relationships with their Own Parents

The current study indicates that both parents' relationships with their own parents and changes in these relationships matter for young adults' closeness to their grandparents within lineage lines. In the cross-sectional analysis, closer relationships between a parent and his or her own parent were associated with closer relationships between young adults and this particular grandparent. These findings are consistent with

those of several previous studies in this area (Brown, 2003; Matthews & Sprey, 1985; Monserud, 2008). Additionally, in support of the kin-keeping perspective and the same-gender parent modeling effect, the mother-grandmother relationship was found in the present study to be predictive of closeness to maternal grandmothers only for granddaughters. On the other hand, contrary to the same-gender parent modeling effect, the father-grandfather relationship was related to closeness to paternal grandfathers only for granddaughters. In the longitudinal analysis, improvements in the mother-grandfather relationship were associated with increases in closeness to maternal grandfathers, whereas improvements in father's relationships with his parents were related to increases in young adults' closeness to paternal grandparents.

Parents' Relationships with their Parents-in-Law

Consistent support was found for the idea that parents' relationships with their in-laws as well as changes in these relationships have implications for the grandparent-grandchild bond across lineage lines. These findings suggest that mothers and fathers can be kin-keepers in the family. Namely, in each dyad examined, stronger relationships between a parent and his or her parent-in-law and improvements in these relationships were predictive of closer relationships and increases in closeness between grandchildren and a specific grandparent, respectively. However, in the cross-sectional analysis, there were gender differences in the association between the father-father-in-law relationship and closeness to maternal grandfathers. Specifically, consistent with the same-gender parent modeling effect, stronger relationships between fathers and their fathers-in-law were associated with more close relationships to maternal grandfathers for grandsons.

Findings of the present study contradict Brown's (2003) who did not find any association between parent-parent-in-law ties and the grandparent-grandchild relationship. One possible explanation for differences in findings between these two studies is that the present research used parents' reports on their relationships with in-laws, whereas Brown (2003) relied on grandchildren's perceptions of these relationships. The parents' perspective on their ties to in-laws may be more accurate than that of grandchildren. Grandchildren may not be aware of parents' actual feelings and the history of their interactions with in-laws. The findings of the current study are partly consistent with those of Matthews and Sprey (1985) and Monserud (2008) who found that only one in-law relationship was associated with grandparent-grandchild closeness: the mother-mother-in-law relationship was predictive of closeness to paternal grandmothers. One possible explanation for this discrepancy between the present study and prior research may lie in the age range of the study grandchildren. Whereas the three previous studies examined relationships between college-age grandchildren and their parents, the present study includes a wider age range. It is possible that parents' relationships with in-laws, with the exception of the mother-mother-in-law bond, are less salient for college-age grandchildren's relationships with their grandparents, because young adults of this age are less likely to be enmeshed in family relationships due to their growing concerns with autonomy and independence.

In general, consistent with the family systems theory the present study indicates that young adults' relationships with their grandparents are embedded in a network of family ties. In particular, the findings indicate that it can be important for grandparents to maintain strong ties to the parent generation, especially to their children-in-law, and for

parents to have close relationships and frequent contact with their offspring so that young adults would have high quality relationships with their grandparents. More specifically, in support of the parent-as mediator theory, findings of the current research suggest that parents through their relationships with the grandparent and grandchild generations matter for the grandparent-grandchild bond, even when grandchildren become young adults. In addition, the results demonstrate that young adults' relationships with their grandparents are contingent on mothers' as well as fathers' intergenerational ties in the family. Therefore, this study provides support not only for the kin-keeping perspective but also for the idea that men can also significantly contribute to family solidarity and continuity. Overall, the findings of this study demonstrate the importance of counteracting the tendency to see women as the only kin-keepers in the family or at least in families where biological parents of grandchildren are married to each other. This study demonstrates that at least in married parent families, men can also mediate relationships between generations. Hence, it is crucial to examine the grandparent-grandchild relationship within a complete kinship network by taking into account each parent's intergenerational ties in the family in order to better understand variations in the grandparent-grandchild bond.

Grandchild's Gender

The present study also found some support for the idea that the association between parents' intergenerational ties in the family and the grandparent-grandchild bond is conditioned by the grandchild's gender. In particular, the results provide support for the idea that the mother's intergenerational ties in the family can be more influential for granddaughter's relationships with grandparents. These findings are consistent with the

kin-keeping perspective and with the same-gender parent modeling effect. As discussed above, stronger mother-child relationships were related to more frequent contact with paternal grandparents only for granddaughters. Stronger relationships between mothers and grandmothers were also associated with closer relationships to maternal grandmothers only for granddaughters. In addition, improvements in the mother-child relationship quality and in the mother-child contact were predictive of increases in closeness to maternal grandmothers only for granddaughters. On the other hand, limited support was found for the argument that fathers' strong intergenerational relationships are more important for grandsons than for granddaughters. In fact, only the positive effect of the father-father-in-law relationship on closeness to maternal grandfathers was statistically significant for grandsons but not for granddaughters. Findings of the present study on the importance of the grandchild's gender for the association between parents' intergenerational ties in the family and the grandparent-grandchild relationship are somewhat consistent with the results of Monserud's (2008) study which found that the association between the father-child relationship and closeness to paternal grandparents was statistically significant only for grandsons.

Interestingly, the findings revealed that not only mother's but also father's strong intergenerational relationships are more salient for granddaughters' closer ties to grandparents. More frequent father-child contact and increases in father-child contact were associated with closer relationships with maternal grandmothers only for granddaughters. The positive effect of the father-child relationship on closeness to maternal grandparents and paternal grandmothers was statistically significant only for granddaughters. The same is true for the positive effect of the father-grandfather

relationship and closeness to paternal grandfathers. In addition, the association between improvements in father-child contact and increases in closeness to maternal grandfathers mattered only for granddaughters. Overall, tests of gender interactions demonstrate that specific intergenerational relationships are more influential for granddaughters than for grandsons. These results are somewhat inconsistent with the social learning theory: it seems that granddaughters model not only their mothers' but also their fathers' behavior. One possible explanation for this trend is that granddaughters are more attuned to and more involved in interpersonal relationships between family members than are grandsons. In some respect these results are consistent with the kin-keeping perspective: compared to grandsons, adult granddaughters as potential kin-keepers in the family are more responsive to family processes and dynamics.

Negative Effects

The results of the present study also indicate that parents' strong intergenerational relationships in the family can have a negative effect on the grandparent-grandchild relationships at least in married parent families. This is especially true for the association between the parent-child relationship and the grandparent-grandchild bond. Specifically, findings indicate that strong relationships between fathers and their sons can be related to less close ties between grandsons and their maternal grandparents, while strong mother-child relationships undermine grandsons' ties to their paternal grandparents. Grandsons who had strong relationships with their father felt less close to their maternal grandmothers, whereas improvements in father-child contact were predictive of decreases in closeness to maternal grandfathers for grandsons. At the same time, stronger mother-child relationships were related to less frequent contact between grandsons and paternal

grandparents, while improvements in the mother-child relationship were related to decreases in grandsons' closeness to paternal grandmothers. Improvements in the mother-child relationship were also associated with decreases in young adults' contact with their maternal grandmothers. Negative effects of the parent-child relationship on young adults' ties to their grandparents are consistent with Monserud's (2008) research in which strong mother-child relationships were associated with less close relationships between grandchildren and paternal grandfathers. As discussed above, these results suggest that in some cases strong relationships between parents and young adults may lead to a weaker grandparent-adult grandchild bond at least in married parent families. A strong parent-child relationship may serve as a "substitution" for offspring's relationships with grandparents by providing young adults with necessary interactions or vice versa.

Cross-sectional vs. Longitudinal Results

Overall, the results of the cross-sectional analysis are congruent with those of the longitudinal analysis, especially for young adults' closeness to grandparents. However, findings also illuminate the importance of examining the interrelatedness of intergenerational relationships in the family at one point in time as well as the linkages between changes in these relationships over time. For instance, cross-sectional data do not show that the mother-child relationship is consequential for contact with maternal grandparents and for closeness to paternal grandmothers, whereas longitudinal data reveals that improvements in the mother-child relationship may be negatively related to young adults' contact with maternal grandparents and to grandsons' closeness to paternal grandmothers. Or put another way, deteriorating mother-child relationships are related to more frequent contact between young adults and their maternal grandparents and to

closer relationships between grandsons and their paternal grandmothers. These findings suggest that even in adulthood, grandchildren are aware of family dynamics. In addition, these results indicate that adult grandchildren can interact more with their maternal grandparents or grandsons with their paternal grandmothers if young adults do not find essential closeness in their relationships with mothers. The findings on the negative associations between changes in the mother-child relationship and changes in the grandparent-grandchild bond can be also explained by different life course stages of the cross-sectional (ages 18-34 at Wave 3) and longitudinal (ages 10-23 at Wave 2 and 18-34 at Wave 3) samples. The results for the longitudinal sample appear to suggest that as grandchildren grow older and experience time and energy constraints they may concentrate more on some specific family relationships (e.g., with their mothers) and less on other relationships (e.g., with their grandparents). Alternatively, these results indicate that when grandchildren transition to young adulthood they may become less dependent on their parents as mediators of their ties to grandparents and may start initiating relationships on their own. In particular, grandchildren who experience issues in their relationships with mothers may turn to their grandparents.

Cross-sectional data reveals the importance of parent-child contact, particularly mother-child contact, for contact with grandparents, regardless of lineage, and for closeness with maternal grandparents. Mother-child contact was found to be consequential for contact with maternal and paternal grandparents and for closeness to both maternal grandparents, whereas father-child contact was predictive of contact with paternal grandparents and of closeness to maternal grandfathers for granddaughters. On the other hand, the longitudinal analysis suggests that changes in the grandparent-

grandchild relationship are less dependent on changes in parent-child contact. Changes in parent-child contact were not related to young adults' contact with grandparents. Additionally, changes in mother-child contact were only associated with changes in granddaughters' closeness to maternal grandmothers and changes in father-child contact only predicted changes in closeness to maternal grandparents.

Limitations and Conclusion

The present study had some limitations. First, causal linkages between parents' intergenerational ties and the grandparent-grandchild bond are not clear in the current research. This study does not directly examine whether parents actively maintain kinship ties in the family and serve as role models to their children, because relevant measures are not available in the NSFH. It is possible that the findings simply reflect some unobserved aspects of more or less close intergenerational ties in the family. However, the results of the present study point to the need for further research addressing the processes by which parents may influence the grandparent-grandchild relationship. Second, except for measures of young adults' relationship quality and contact with their parents, all other measures of intergenerational relationships were captured by a single questionnaire item. Third, the analyses were also limited to young adults whose biological parents were married to each, because not all the measures of intergenerational ties in the family are available for other groups of young adults in the NSFH. The association between changes in parents' relationships with the grandparent and grandchild generations and the grandparent-grandchild bond can be different for other groups of young adults (e.g., in separated, divorced, widowed, remarried or never married families) due to different family dynamics in these families. The extant literature

demonstrates, for instance, that parental divorce is associated with the deterioration of grandchildren's relationships with paternal grandparents over time because fathers who are usually non-custodial parents gradually disengage from their offspring's lives (Cherlin & Furstenberg, 1986; Kruk & Hall, 1995). The present study did not find that father-child contact or changes in father-child contact were consequential for young adults' closeness to paternal grandparents. Additionally, changes in father-child contact were not associated with changes in grandchildren's contact with paternal grandparents. Also, there was no consistent support found for the contention that father-child relationships or changes in these relationships matter for grandchildren's closeness to both paternal grandparents. It is possible that in separated, divorced, and never married families, father-child ties are more influential for grandchildren's relationships with their paternal grandparents.

Despite its limitations, the present research has certain strengths. None of the previous studies in this area have examined whether changes in parents intergenerational ties in the families are related to changes in young adults' relationships with their grandparents. The analyses presented here lend support for the argument that changes in parents' ties to the grandparent and grandchild generations are salient for the grandparent-grandchild bond even when grandchildren become adults. Additionally, in the area of limited study, the research demonstrates that the association between changes in parents' intergenerational relationships in the family and changes in young adults' interactions with their grandparents varies by the grandchild's gender. More specifically, the findings of the present study suggest that mother's as well as father's

intergenerational ties in the family are more influential for granddaughters' than grandsons' relationships with grandparents.

Overall, this study demonstrates that it is important to examine the continuity and change in the grandparent-grandchild relationships within a complete kinship network in order to better understand how dynamics within a larger family system may shape a specific dyadic relationship between younger and older generations in the family. Research on the development of the grandparent-grandchild relationship over the life course can also advance our general understanding of the roles of the adult grandchild and of the grandparent with adult grandchildren. The findings of this study can be important for family educators, social workers, and family counselors by providing these professionals with some insights about how family continuity and intergenerational solidarity between grandparents and adult grandchildren develops and evolves over time. For example, the findings consistently demonstrate that both parents' strong relationships with their own parents and their parents-in-law are influential for close ties between young adults and their grandparents. In particular, this study indicates that it is important for both maternal and paternal grandparents to pay attention not only to their relationships with their own children but also with their children-in-law. Because deteriorating family relationships can be consequential for individuals' overall wellbeing and access to different kinds of support from family members, it is important to educate people about the significance of family ties in their lives. Understanding of the dynamics of intergenerational relationships can help family members improve interpersonal relationships and cope with relevant issues in their own families.

Table 2.1. Zero-Order Correlations: Cross-Sectional Analysis.

| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|--|---------|---------|--------|--------|--------|--------|--------|---------|
| 1. Mother-child contact | - | | | | | | | |
| 2. Father-child contact | .77*** | - | | | | | | |
| 3. Mother-child relationship | .12** | .07† | - | | | | | |
| 4. Father-child relationship | .01 | .16*** | .49*** | - | | | | |
| 5. Mother-grandmother relationship | .04 | .04 | .27*** | .09* | - | | | |
| 6. Mother-grandfather relationship | -.03 | .01 | .24*** | .17** | .46*** | - | | |
| 7. Father-grandmother relationship | -.02 | .03 | .09† | .15** | .12† | .04 | - | |
| 8. Father-grandfather relationship | .03 | .10 | -.02 | .07 | .05 | -.08 | .69*** | - |
| 9. Mother-mother-in-law relationship | -.01 | .02 | .15*** | .06 | .30*** | .21** | .48*** | .30*** |
| 10. Mother-father-in-law relationship | .07 | .11 | .08 | -.03 | .20* | .11 | .41*** | .58*** |
| 11. Father-mother-in-law relationship | -.08† | -.03 | .11* | .30*** | .39*** | .10 | .35*** | .19* |
| 12. Father-father-in-law relationship | -.13* | -.09 | .10 | .22*** | .01 | .31*** | .26** | .49*** |
| 13. Granddaughter | .08* | -.07† | .07† | -.06 | .09† | -.05 | -.01 | -.01 |
| 14. Grandchild's age | -.21*** | -.24*** | .12*** | .16*** | .04 | .10† | -.01 | -.05 |
| 15. White | -.10** | -.09* | -.01 | .05 | -.10* | .01 | -.12* | .01 |
| 16. Grandchild's education | -.21*** | -.19*** | .06† | .11** | .06 | .17** | -.14** | -.30*** |
| 17. Mother's education | -.20*** | -.14*** | -.08* | -.05 | -.01 | .01 | -.11* | -.10 |
| 18. Father's education | -.21*** | -.13*** | -.04 | -.05 | .03 | -.07 | -.15** | -.17* |
| 19. Separate residence | -.52*** | -.58*** | .06† | .07† | -.03 | -.07 | -.09† | -.09 |
| 20. Enrolled in school | .02 | .03 | -.07* | -.07† | .02 | -.13* | -.02 | .01 |
| 21. Full-time job | .01 | .04 | .05 | .11** | -.04 | .13* | .05 | -.02 |
| 22. Married | -.15*** | -.19*** | .16*** | .19*** | -.01 | .01 | -.06 | -.06 |
| 23. Parent | .02 | -.06† | .09* | .16*** | .11* | -.01 | .03 | .11 |
| 24. Both maternal grandparents alive | .04 | .05 | .03 | .01 | .02 | -.01 | .04 | .01 |
| 25. Both paternal grandparents alive | .05 | .09** | -.01 | -.08* | -.02 | -.08 | -.09† | .12† |
| 26. Contact with maternal grandparents | .10* | .07 | -.06 | -.09* | .02 | -.03 | .04 | .06 |
| 27. Contact with paternal grandparents | .28*** | .29*** | -.06 | -.01 | .02 | -.05 | .26*** | .29*** |
| 28. Closeness to maternal grandmother | .16*** | .04 | .12* | .03 | .23*** | .11 | -.01 | -.03 |
| 29. Closeness to maternal grandfather | .13* | .05 | .19** | .20** | .05 | .39*** | .07 | .14 |
| 30. Closeness to paternal grandmother | .01 | .06 | .06 | .15** | .01 | .04 | .33*** | .32*** |
| 31. Closeness to paternal grandfather | .11 | .13† | .12† | .09 | -.03 | -.12 | .30*** | .41*** |

Table 2.1. Continued.

| Variables | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|--|--------|---------|--------|--------|---------|---------|---------|---------|
| 9. Mother-mother-in-law relationship | - | | | | | | | |
| 10. Mother-father-in-law relationship | .52*** | - | | | | | | |
| 11. Father-mother-in-law relationship | .09† | -.05 | - | | | | | |
| 12. Father-father-in-law relationship | -.02 | .07 | .36*** | - | | | | |
| 13. Granddaughter | .06† | .02 | -.02 | -.08 | - | | | |
| 14. Grandchild's age | .02 | -.05 | .10* | .05 | -.04 | - | | |
| 15. White | .02 | .04 | -.07 | .02 | .07† | .06† | - | |
| 16. Grandchild's education | -.01 | -.28*** | .09† | .07 | .10** | .36*** | .08* | - |
| 17. Mother's education | -.03 | -.06 | -.01 | -.02 | -.02 | -.10** | .04 | .21*** |
| 18. Father's education | -.03 | -.15* | .03 | -.03 | .02 | -.02 | .11** | .27*** |
| 19. Separate residence | -.01 | -.03 | -.02 | .11† | .10** | .32*** | .17*** | .16*** |
| 20. Enrolled in school | -.02 | -.06 | .01 | -.04 | .05 | -.45*** | .05 | -.13*** |
| 21. Full-time job | -.02 | .05 | .03 | .06 | -.24*** | .30*** | .03 | .16*** |
| 22. Married | -.03 | .12† | -.02 | -.03 | .09** | .51*** | .12** | .16*** |
| 23. Parent | .06 | .16* | .05 | -.07 | .09** | .45*** | .04 | -.02 |
| 24. Both maternal grandparents alive | -.08* | -.08 | -.02 | -.03 | .03 | -.27*** | .02 | -.07* |
| 25. Both paternal grandparents alive | -.05 | .06 | -.09† | -.06 | -.02 | -.32*** | .02 | -.12** |
| 26. Contact with maternal grandparents | -.02 | .08 | .06 | .07 | .03 | -.04 | -.09* | -.04 |
| 27. Contact with paternal grandparents | .16** | .19** | -.08 | -.07 | -.01 | -.18*** | -.01 | -.15** |
| 28. Closeness to maternal grandmother | .01 | -.06 | .34*** | .16* | .12* | -.08† | -.19*** | .03 |
| 29. Closeness to maternal grandfather | -.05 | -.04 | .16* | .39*** | -.02 | -.04 | -.10† | .07 |
| 30. Closeness to paternal grandmother | .35*** | .34*** | -.01 | .09 | -.04 | -.01 | -.03 | .04 |
| 31. Closeness to paternal grandfather | .31*** | .47*** | -.06 | .08 | -.17* | -.19** | -.10 | -.21** |

Table 2.1. Continued.

| Variables | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|--|---------|---------|---------|---------|--------|---------|---------|--------|
| 17. Mother's education | - | | | | | | | |
| 18. Father's education | .59*** | - | | | | | | |
| 19. Separate residence | .12** | .12** | - | | | | | |
| 20. Enrolled in school | .15*** | .17*** | -.06† | - | | | | |
| 21. Full-time job | -.08* | -.11** | .03 | -.39*** | - | | | |
| 22. Married | -.11** | -.02 | .36*** | -.32*** | .13*** | - | | |
| 23. Parent | -.13*** | -.18*** | .25*** | -.27*** | .01 | .59*** | - | |
| 24. Both maternal grandparents alive | .05 | .05 | -.05 | .15*** | -.06 | -.12** | -.15*** | - |
| 25. Both paternal grandparents alive | .04 | .05 | -.11** | .15*** | -.10** | -.15*** | -.15*** | .15*** |
| 26. Contact with maternal grandparents | -.01 | -.03 | -.05 | -.05 | -.04 | -.04 | -.02 | .04 |
| 27. Contact with paternal grandparents | -.08† | -.11* | -.24*** | .08† | .01 | -.13** | -.02 | .09† |
| 28. Closeness to maternal grandmother | .01 | -.09* | -.07 | -.07 | -.05 | -.05 | -.06 | .09† |
| 29. Closeness to maternal grandfather | -.02 | -.24*** | -.04 | -.06 | .05 | -.08 | -.05 | .07 |
| 30. Closeness to paternal grandmother | -.05 | -.06 | -.08 | .12* | .01 | -.07 | -.01 | .09† |
| 31. Closeness to paternal grandfather | .03 | -.07 | -.12† | .09 | .05 | -.07 | -.01 | .10 |

Table 2.1. Continued.

| Variables | 25 | 26 | 27 | 28 | 29 | 30 | 31 |
|--|------|--------|--------|--------|------|--------|----|
| 25. Both paternal grandparents alive | - | | | | | | |
| 26. Contact with maternal grandparents | -.01 | - | | | | | |
| 27. Contact with paternal grandparents | .10* | .17** | - | | | | |
| 28. Closeness to maternal grandmother | .07 | .19*** | .03 | - | | | |
| 29. Closeness to maternal grandfather | .02 | .16** | .06 | .70*** | - | | |
| 30. Closeness to paternal grandmother | .01 | .06 | .52*** | .06 | .19* | - | |
| 31. Closeness to paternal grandfather | .12† | -.04 | .49*** | .13 | .12 | .75*** | - |

† $\leq .10$. * $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Table 2.2. Zero-Order Correlations: Longitudinal Analysis.

| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---------|---------|--------|--------|--------|--------|--------|
| 1. Change in mother-child contact | - | | | | | | |
| 2. Change in father-child contact | .79*** | - | | | | | |
| 3. Change in mother-child relationship | .02 | .01 | - | | | | |
| 4. Change in father-child relationship | -.01 | .04 | .46*** | - | | | |
| 5. Change in mother-grandmother relationship | -.03 | -.01 | .18*** | .09* | - | | |
| 6. Change in mother-grandfather relationship | -.05 | -.02 | .15* | .15* | .17* | - | |
| 7. Change in father-grandmother relationship | .05 | .06 | .04 | .03 | .05 | -.04 | - |
| 8. Change in father-grandfather relationship | .06 | .04 | .14* | .01 | -.19* | -.07 | .36*** |
| 9. Change in mother-mother-in-law relationship | .06 | .06 | .11* | .06 | .21** | .30*** | .32*** |
| 10. Change in mother-father-in-law relationship | .18** | .12† | .03 | .01 | .16† | .22* | .32*** |
| 11. Change in father-mother-in-law relationship | -.04 | .03 | .03 | .25*** | .23*** | -.15* | .26*** |
| 12. Change in father-father-in-law relationship | -.07 | -.03 | .06 | .01 | -.22** | .18** | .12 |
| 13. Granddaughter | .03 | -.11** | .04 | .01 | .06 | -.03 | -.05 |
| 14. Grandchild's age | .17*** | .09* | .17*** | .23*** | -.02 | .05 | .17** |
| 15. White | -.05 | -.04 | .03 | .05 | -.01 | .08 | -.01 |
| 16. Grandchild's education | -.05 | -.05 | .09* | .17*** | -.04 | .10 | -.07 |
| 17. Mother's education | -.22*** | -.15*** | -.02 | .02 | -.03 | .07 | -.12* |
| 18. Father's education | -.17*** | -.10** | -.01 | -.01 | -.07 | .03 | -.09† |
| 19. Started living alone between waves | -.46*** | -.48*** | .10** | .05 | .07 | .01 | -.10* |
| 20. Enrolled in school between waves | -.13*** | -.10** | -.11** | -.12** | -.01 | -.18** | -.03 |
| 21. Started working full-time between waves | -.03 | .03 | -.02 | .01 | -.06 | .16** | .05 |
| 22. Got married between waves | .01 | -.03 | .10** | .13*** | .01 | .02 | -.01 |
| 23. Became a parent between waves | .12** | .08* | .07† | .18*** | .09† | -.16** | .01 |
| 24. Both maternal grandparents alive | -.08* | -.05 | -.08* | -.09* | -.07 | -.02 | -.12* |
| 25. Both paternal grandparents alive | -.06 | .01 | -.02 | -.10** | .03 | .01 | -.14** |

Table 2.2. Continued

| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--|------|-------|--------|--------|------|--------|--------|
| 26. Change in contact with maternal grandparents | .08† | .07 | -.10* | -.04 | .02 | .06 | .01 |
| 27. Change in contact with paternal grandparents | .10* | .13** | -.01 | .02 | -.03 | .05 | .21*** |
| 28. Change in closeness to maternal grandmother | .05 | -.03 | .15** | .21*** | .11* | .09 | .06 |
| 29. Change in closeness to maternal grandfather | -.01 | -.02 | .22*** | .24*** | -.07 | .23*** | -.16* |
| 30. Change in closeness to paternal grandmother | .02 | -.01 | .10† | .15** | -.03 | .05 | .18*** |
| 31. Change in closeness to paternal grandfather | -.01 | -.02 | .24** | .22** | .09 | .15 | .20* |

Table 2.2. Continued.

| Variables | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|--|--------|--------|--------|--------|-------|--------|---------|
| 8. Change in father-grandfather relationship | - | | | | | | |
| 9. Change in mother-mother-in-law relationship | .19* | - | | | | | |
| 10. Change in mother-father-in-law relationship | .35*** | .63*** | - | | | | |
| 11. Change in father-mother-in-law relationship | -.10 | .12† | -.02 | - | | | |
| 12. Change in father-father-in-law relationship | .20* | -.10 | -.04 | .20** | - | | |
| 13. Granddaughter | .04 | .02 | .08 | .02 | -.10 | - | |
| 14. Grandchild's age | -.08 | .10† | .06 | .07 | .06 | -.04 | - |
| 15. White | .06 | .04 | -.02 | -.02 | -.05 | .07† | .06† |
| 16. Grandchild's education | -.02 | .02 | -.06 | -.01 | -.15* | .10** | .36*** |
| 17. Mother's education | .18** | -.03 | .08 | -.08† | .07 | -.02 | -.10** |
| 18. Father's education | .11 | -.01 | -.03 | .01 | .01 | .02 | -.02 |
| 19. Started living alone between waves | .01 | -.06 | -.10 | -.10* | .08 | .01 | -.15*** |
| 20. Enrolled in school between waves | .08 | -.11* | -.01 | -.05 | -.03 | .05 | -.45*** |
| 21. Started working full-time between waves | .13† | .05 | .10 | .02 | .03 | -.10** | -.15*** |
| 22. Got married between waves | -.01 | .07 | .07 | .06 | .01 | .02 | .33*** |
| 23. Became a parent between waves | .03 | -.01 | .06 | .08 | -.04 | .07† | .33*** |
| 24. Both maternal grandparents alive | .11 | -.15** | -.15* | -.12* | -.04 | .03 | -.27*** |
| 25. Both paternal grandparents alive | .07 | -.13* | .05 | -.08† | -.02 | -.02 | -.32*** |
| 26. Change in contact with maternal grandparents | .07 | .01 | .10 | .08† | -.02 | .05 | .01 |
| 27. Change in contact with paternal grandparents | .10 | .08 | .07 | -.07 | .01 | -.02 | -.01 |
| 28. Change in closeness to maternal grandmother | .07 | .07 | -.02 | .23*** | .11† | .03 | .14** |
| 29. Change in closeness to maternal grandfather | .07 | -.22** | -.13 | .13† | .15* | .03 | .19** |
| 30. Change in closeness to paternal grandmother | .08 | .18*** | .18* | -.11† | -.01 | -.01 | .25*** |
| 31. Change in closeness to paternal grandfather | .25*** | .28*** | .30*** | .12 | .17† | -.13† | .17* |

Table 2.2. Continued.

| Variables | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
|--|-------|---------|--------|--------|--------|---------|---------|
| 15. White | - | | | | | | |
| 16. Grandchild's education | .08* | - | | | | | |
| 17. Mother's education | .04 | .22*** | - | | | | |
| 18. Father's education | .11** | .27*** | .59*** | - | | | |
| 19. Started living alone between waves | .07* | -.10** | .11** | .06† | - | | |
| 20. Enrolled in school between waves | .05 | -.13*** | .15*** | .17*** | .12** | - | |
| 21. Started working full-time between waves | .01 | .10** | .03 | -.03 | -.02 | -.15*** | - |
| 22. Got married between waves | .08* | .15*** | -.06† | .03 | .17*** | -.27*** | .02 |
| 23. Became a parent between waves | .04 | .01 | -.05 | -.10** | .07† | -.23*** | -.14*** |
| 24. Both maternal grandparents alive | .02 | -.07* | .05 | .05 | .08* | .15*** | .01 |
| 25. Both paternal grandparents alive | .02 | -.12** | .04 | .05 | .04 | .15*** | .05 |
| 26. Change in contact with maternal Grandparents | .05 | .03 | -.04 | .07 | -.12** | -.01 | -.07 |
| 27. Change in contact with paternal grandparents | -.01 | -.04 | .07 | .11* | -.13** | .02 | -.05 |
| 28. Change in closeness to maternal grandmother | -.08† | .16*** | .03 | -.04 | -.06 | -.09† | .04 |
| 29. Change in closeness to maternal grandfather | -.04 | .20** | .07 | -.05 | .01 | -.13* | .13* |
| 30. Change in closeness to paternal grandmother | .04 | .12* | -.01 | .01 | -.08 | -.04 | -.04 |
| 31. Change in closeness to paternal grandfather | -.01 | .03 | .03 | -.05 | -.05 | -.12† | .11 |

Table 2.2. Continued.

| Variables | 22 | 23 | 24 | 25 | 26 | 27 | 28 |
|--|--------|---------|--------|------|-------|--------|--------|
| 22. Got married between waves | - | | | | | | |
| 23. Became a parent between waves | .43*** | - | | | | | |
| 24. Both maternal grandparents alive | -.08* | -.13*** | - | | | | |
| 25. Both paternal grandparents alive | -.11** | -.10** | .15*** | - | | | |
| 26. Change in contact with maternal grandparents | -.01 | .01 | .10* | -.01 | - | | |
| 27. Change in contact with paternal grandparents | -.04 | -.03 | .05 | -.05 | .13** | - | |
| 28. Change in closeness to maternal grandmother | -.04 | -.08† | -.05 | -.06 | .15** | .03 | - |
| 29. Change in closeness to maternal grandfather | -.05 | -.11† | .04 | -.04 | .08 | -.04 | .68*** |
| 30. Change in closeness to paternal grandmother | .03 | .06 | -.03 | -.08 | -.01 | .34*** | .21** |
| 31. Change in closeness to paternal grandfather | .08 | .06 | -.01 | .07 | .05 | .30*** | .46*** |

Table 2.2. Continued.

| Variables | 29 | 30 | 31 |
|---|--------|--------|----|
| 29. Change in closeness to maternal grandfather | - | | |
| 30. Change in closeness to paternal grandmother | .33*** | - | |
| 31. Change in closeness to paternal grandfather | .39*** | .71*** | - |

† $\leq .10$. * $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Table 2.3. Descriptive Statistics: Cross-Sectional Sample.

| Variables | <i>M</i> | <i>SD</i> | <i>Range</i> | <i>Unweighted N</i> |
|---------------------------------------|----------|-----------|--|-------------------------|
| <u>Dependent Variables</u> | | | | |
| 1. Contact with maternal grandparents | 2.88 | 1.01 | 1 (not at all) – 5 (more than once a week) | 412 |
| 2. Contact with paternal grandparents | 2.46 | .90 | 1 (not at all) – 5 (more than once a week) | 360 |
| 3. Closeness to maternal grandmother | 6.34 | 2.49 | 0 (not at all) – 10 (extremely close) | 354 |
| 4. Closeness to maternal grandfather | 6.12 | 2.51 | 0 (not at all) – 10 (extremely close) | 219 |
| 5. Closeness to paternal grandmother | 5.86 | 2.62 | 0 (not at all) – 10 (extremely close) | 316 |
| 6. Closeness to paternal grandfather | 5.61 | 2.84 | 0 (not at all) – 10 (extremely close) | 177 |
| <u>Independent Variables</u> | | | | |
| 7. Mother-child contact | 4.15 | .87 | 1 (not at all)– 5 (more than once a week) | 619 |
| 8. Father-child contact | 3.90 | 1.01 | 1 (not at all)– 5 (more than once a week) | 619 |
| 9. Mother-child relationship | 8.33 | 1.19 | 0 (really bad) – 10 (absolutely perfect) | 619 |
| 10. Father-child relationship | 8.02 | 1.30 | 0 (really bad) – 10 (absolutely perfect) | 619 |
| 11. Mother-grandmother relationship | 7.97 | 2.11 | 0 (really bad) – 10 (absolutely perfect) | 354 |
| 12. Mother-grandfather relationship | 8.03 | 1.84 | 0 (really bad) – 10 (absolutely perfect) | 219 |
| 13. Father-grandmother relationship | 8.11 | 2.10 | 0 (really bad) – 10 (absolutely perfect) | 316 |
| 14. Father-grandfather relationship | 7.60 | 2.31 | 0 (really bad) – 10 (absolutely perfect) | 177 |
| 15. Mother-mother-in-law relationship | 7.32 | 2.29 | 0 (really bad) – 10 (absolutely perfect) | 316 |
| 16. Mother-father-in-law relationship | 6.97 | 2.60 | 0 (really bad) – 10 (absolutely perfect) | 177 |
| 17. Father-mother-in-law relationship | 7.50 | 2.27 | 0 (really bad) – 10 (absolutely perfect) | 354 |
| 18. Father-father-in-law relationship | 7.48 | 2.10 | 0 (really bad) – 10 (absolutely perfect) | 219 |
| 19. Granddaughter | .51 | .50 | 0 (no) – 1 (yes) | 619 |

Note: Weighted means and standard deviations are shown.

Table 2.3. Continued.

| Variables | <i>M</i> | <i>SD</i> | <i>Range</i> | <i>Unweighted N</i> |
|---|----------|-----------|---|-------------------------|
| <u>Control Variables</u> | | | | |
| 20. Grandchild's age | 25.59 | 4.50 | 18 – 34 | 619 |
| 21. White | .91 | .28 | 0 (no) - 1 (yes) | 619 |
| 22. Grandchild's education | 14.02 | 1.62 | 10 (10 th grade) – 20 (doctorate) | 619 |
| 23. Mother's education | 13.63 | 2.34 | 5 (5 th grade) – 20 (doctorate) | 619 |
| 24. Father's education | 14.28 | 2.66 | 4 (4 th grade) – 20 (doctorate) | 619 |
| 22. Separate residence | .76 | .43 | 0 (no) - 1 (yes) | 619 |
| 23. Enrollment in school | .28 | .45 | 0 (no) - 1 (yes) | 619 |
| 24. Full-time job | .66 | .48 | 0 (no) - 1 (yes) | 619 |
| 25. Married | .36 | .48 | 0 (no) - 1 (yes) | 619 |
| 26. Parent | .30 | .46 | 0 (no) – 1 (yes) | 619 |
| 27. Both maternal grandparents alive | .26 | .44 | 0 (no) - 1 (yes) | 619 |
| 28. Both paternal grandparents Alive | .21 | .41 | 0 (no) - 1 (yes) | 619 |

Note: Weighted means and standard deviations are shown.

Table 2.3(A). Descriptive Statistics Separately for Grandsons and Granddaughters and T-Test: Cross-Sectional Sample.

| Variables | Grandsons <i>N</i> = 303 ¹ | | Granddaughters <i>N</i> = 316 ¹ | | <i>t</i> -test <i>M</i> difference |
|---------------------------------------|--|-----------|---|-----------|---------------------------------------|
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | |
| <u>Dependent Variables</u> | | | | | |
| 1. Contact with maternal grandparents | 2.50 | .97 | 2.79 | 1.04 | -.29** |
| 2. Contact with paternal grandparents | 2.46 | .89 | 2.45 | .91 | .01 |
| 3. Closeness to maternal grandmother | 6.04 | 2.52 | 6.62 | 2.43 | -.58* |
| 4. Closeness to maternal grandfather | 6.17 | 2.61 | 6.08 | 2.44 | .10 |
| 5. Closeness to paternal grandmother | 5.96 | 2.41 | 5.76 | 5.15 | .20 |
| 6. Closeness to paternal grandfather | 6.11 | 2.80 | 5.15 | 2.81 | .95* |
| <u>Independent Variables</u> | | | | | |
| 7. Mother-child contact | 4.09 | .89 | 4.22 | .84 | -.13* |
| 8. Father-child contact | 3.97 | 1.02 | 3.84 | .99 | .14† |
| 9. Mother-child relationship | 8.25 | 1.18 | 8.40 | 1.20 | -.16† |
| 10. Father-child relationship | 8.09 | 1.30 | 7.94 | 1.31 | .15 |
| 11. Mother-grandmother relationship | 7.78 | 2.27 | 8.16 | 1.93 | -.38† |
| 12. Mother-grandfather relationship | 8.13 | 1.75 | 7.94 | 1.91 | .19 |
| 13. Father-grandmother relationship | 8.12 | 2.13 | 8.10 | 2.07 | .02 |
| 14. Father-grandfather relationship | 7.62 | 2.38 | 7.59 | 2.25 | .03 |
| 15. Mother-mother-in-law relationship | 7.06 | 1.60 | 7.26 | 1.67 | -.19† |
| 16. Mother-father-in-law relationship | 6.92 | 2.76 | 7.02 | 2.46 | -.10 |
| 17. Father-mother-in-law relationship | 7.54 | 2.23 | 7.46 | 2.33 | .08 |
| 18. Father-father-in-law relationship | 7.66 | 1.99 | 7.34 | 2.18 | .32 |
| 19. Granddaughter | - | - | - | - | - |

Table 2.3(A). Continued.

| Variables | Grandsons <i>N</i> = 303 ¹ | | Granddaughters <i>N</i> = 316 ¹ | | <i>t</i> -test |
|---|--|-----------|---|-----------|---------------------|
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> difference |
| <u>Control Variables</u> | | | | | |
| 20. Grandchild's age | 25.78 | 4.56 | 25.41 | 4.41 | .37 |
| 21. White | .90 | .31 | .93 | .25 | -.04† |
| 22. Grandchild's education | 13.85 | 1.60 | 14.18 | 1.63 | -.33** |
| 23. Mother's education | 13.67 | 2.50 | 13.60 | 2.19 | .08 |
| 24. Father's education | 14.22 | 2.74 | 14.33 | 2.58 | -.11 |
| 22. Separate residence | .72 | .45 | .80 | .40 | -.08** |
| 23. Enrollment in school | .26 | .44 | .30 | .46 | -.04 |
| 24. Full-time job | .77 | .42 | .55 | .50 | .23*** |
| 25. Married | .32 | .47 | .40 | .49 | -.09** |
| 26. Parent | .25 | .44 | .34 | .47 | -.09** |
| 27. Both maternal grandparents alive | .25 | .43 | .28 | .45 | -.03 |
| 28. Both paternal grandparents alive | .21 | .41 | .20 | .40 | .01 |

¹The sample size varied slightly across measures of intergenerational relationships reflecting the number of respondents with each type of grandparent still living.

Note: Weighted means and standard deviations are shown. Unweighted *N*s are shown.

† $p \leq .10$. * $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Table 2.4. Descriptive Statistics: Longitudinal Sample.

| Variables | <i>M</i> | <i>SD</i> | <i>Range</i> | <i>Unweighted N</i> |
|---|----------|-----------|------------------|-------------------------|
| <u>Dependent Variables</u> | | | | |
| 1. Change in contact with maternal grandparents | -.33 | 1.09 | -4 – 4 | 401 |
| 2. Change in contact with paternal grandparents | -.43 | 1.13 | -3 – 3 | 349 |
| 3. Change in closeness to maternal grandmother | -1.39 | 2.34 | -9 – 8 | 348 |
| 4. Change in closeness to maternal grandfather | -1.49 | 2.64 | -10 – 8 | 213 |
| 5. Change in closeness to paternal grandmother | -1.40 | 2.53 | -10 – 8 | 307 |
| 6. Change in closeness to paternal grandfather | -1.74 | 2.47 | -9 – 4 | 169 |
| <u>Independent Variables</u> | | | | |
| 7. Change in mother-child contact | -.55 | .91 | -3.50 – 2.50 | 619 |
| 8. Change in father-Child contact | -.80 | 1.05 | -4 - .250 | 619 |
| 9. Change in mother-child relationship | -.11 | 1.31 | -7 – 6 | 619 |
| 10. Change in father-child relationship | -.23 | 1.39 | -8 – 5 | 619 |
| 11. Change in mother-grandmother relationship | -.09 | 1.68 | -9 – 6 | 348 |
| 12. Change in mother-grandfather relationship | .27 | 1.53 | -5 – 5 | 213 |
| 13. Change in father-grandmother relationship | .36 | 1.71 | -8 – 5 | 307 |
| 14. Change in father-grandfather relationship | .11 | 1.69 | -6 – 6 | 169 |
| 15. Change in mother-mother-in-law relationship | .24 | 1.97 | -8 – 8 | 307 |
| 16. Change in mother-father-in-law relationship | .04 | 2.43 | -10 – 8 | 169 |
| 17. Change in father-mother-in-law relationship | .03 | 1.91 | -7 – 7 | 348 |
| 18. Change in father-father-in-law relationship | .05 | 1.58 | -8 – 6 | 213 |
| 19. Granddaughter | .51 | .50 | 0 (no) - 1 (yes) | 619 |

Note: Weighted means and standard deviations are shown.

Table 2.4. Continued.

| Variables | <i>M</i> | <i>SD</i> | <i>Range</i> | <i>Unweighted N</i> |
|---|----------|-----------|---|-------------------------|
| <u>Control Variables</u> | | | | |
| 20. Grandchild's age | 25.59 | 4.50 | 18 – 34 | 619 |
| 21. White | .91 | .28 | 0 (no) - 1 (yes) | 619 |
| 22. Grandchild's education | 14.02 | 1.62 | 10 (10 th grade) – 20 (doctorate) | 619 |
| 23. Mother's education | 13.63 | 2.34 | 5 (5 th grade) – 20 (doctorate) | 619 |
| 24. Father's education | 14.28 | 2.66 | 4 (4 th grade) – 20 (doctorate) | 619 |
| 25. Started living alone between waves | .57 | .49 | 0 (no) – 1 (yes) | 619 |
| 26. Enrolled in school between waves | .28 | .45 | 0 (no) - 1 (yes) | 619 |
| 27. Started working full-time between waves | .44 | .50 | 0 (no) - 1 (yes) | 619 |
| 28. Got married between waves | .29 | .45 | 0 (no) - 1 (yes) | 619 |
| 29. Became a parent between waves | .25 | .43 | 0 (no) - 1 (yes) | 619 |
| 30. Both maternal grandparents alive | .26 | .44 | 0 (no) - 1 (yes) | 619 |
| 31. Both paternal grandparents alive | .21 | .41 | 0 (no) - 1 (yes) | 619 |

Note: Weighted means and standard deviations are shown.

Table 2.4(A). Descriptive Statistics Separately for Grandsons and Granddaughters and T-Test: Longitudinal Sample.

| Variables | Grandsons N = 303 ¹ | | Granddaughters N = 316 ¹ | | <i>t</i> -test <i>M</i> difference |
|---|-----------------------------------|-----------|--|-----------|---------------------------------------|
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | |
| <u>Dependent Variables</u> | | | | | |
| 1. Change in contact with maternal grandparents | -.39 | .93 | -.28 | 1.22 | -.11 |
| 2. Change in contact with paternal grandparents | -.41 | 1.09 | -.45 | 1.16 | .04 |
| 3. Change in closeness to maternal grandmother | -1.45 | 2.18 | -1.33 | 2.50 | -.12 |
| 4. Change in closeness to maternal grandfather | -1.59 | 2.77 | -1.41 | 2.55 | -.17 |
| 5. Change in closeness to paternal grandmother | -1.38 | 2.19 | -1.42 | 2.79 | .04 |
| 6. Change in closeness to paternal grandfather | -1.42 | 2.27 | -2.04 | 2.61 | .63† |
| <u>Independent Variables</u> | | | | | |
| 7. Change in mother-child contact | -.58 | .98 | -.53 | .84 | -.05 |
| 8. Change in father-Child contact | -.69 | 1.07 | -.91 | 1.02 | .22** |
| 9. Change in mother-child relationship | -.16 | 1.21 | -.07 | 1.41 | -.09 |
| 10. Change in father-child relationship | -.23 | 1.23 | -.23 | 1.52 | 0 |
| 11. Change in mother-grandmother relationship | -.19 | 1.78 | .01 | 1.57 | -.19 |
| 12. Change in mother-grandfather relationship | .26 | 1.27 | .18 | 1.72 | .08 |
| 13. Change in father-grandmother relationship | .40 | 1.87 | .23 | 1.65 | .17 |
| 14. Change in father-grandfather relationship | -.07 | 1.90 | .07 | 1.62 | -.15 |
| 15. Change in mother-mother-in-law relationship | .18 | 2.03 | .24 | 2.04 | -.06 |
| 16. Change in mother-father-in-law relationship | -.20 | 2.63 | .23 | 2.41 | -.42 |
| 17. Change in father-mother-in-law relationship | -.03 | 1.95 | .07 | 1.86 | -.09 |
| 18. Change in father-father-in-law relationship | .26 | 1.47 | -.05 | 1.66 | .31 |
| 19. Granddaughter | - | - | - | - | - |

Table 2.4(A). Continued.

| Variables | Grandsons <i>N</i> = 303 ¹ | | Granddaughters <i>N</i> = 316 ¹ | | <i>t</i> -test |
|---|--|-----------|---|-----------|---------------------|
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> difference |
| <u>Control Variables</u> | | | | | |
| 20. Grandchild's age | 25.78 | 4.56 | 25.41 | 4.44 | .37 |
| 21. White | .90 | .31 | .93 | .25 | -.04† |
| 22. Grandchild's education | 13.85 | 1.60 | 14.18 | 1.63 | -.33** |
| 23. Mother's education | 13.67 | 2.50 | 13.60 | 2.19 | .08 |
| 24. Father's education | 14.22 | 2.74 | 14.33 | 2.58 | -.11 |
| 25. Started living alone between waves | .57 | .50 | .58 | .49 | -.01 |
| 26. Enrolled in school between waves | .26 | .44 | .30 | .46 | -.04 |
| 27. Started working full-time between waves | .49 | .50 | .40 | .49 | .10** |
| 28. Got married between waves | .28 | .45 | .29 | .46 | -.02 |
| 29. Became a parent between waves | .22 | .41 | .28 | .45 | -.06† |
| 30. Both maternal grandparents alive | .25 | .43 | .28 | .45 | -.03 |
| 31. Both paternal grandparents alive | .21 | .41 | .20 | .40 | .01 |

¹The sample size varied slightly across measures of intergenerational relationships reflecting the number of respondents with each type of grandparent still living.

Note: Weighted means and standard deviations are shown. Unweighted *N*s are shown. † $p \leq .10$. * $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Table 2.4(B). Descriptive Statistics: Changes between Waves in Grandparent-Grandchild Relationships and Other Intergenerational Relationships.

| Variables | Deterioration | The Same | Improvement | <i>Unweighted N</i> |
|---|---------------|----------|-------------|-------------------------|
| <u>Dependent Variables</u> | | | | |
| 1. Change in contact with maternal grandparents | 49.2 | 31.1 | 19.8 | 401 |
| 2. Change in contact with paternal grandparents | 51.2 | 29.2 | 19.6 | 349 |
| 3. Change in closeness to maternal grandmother | 61.6 | 23.1 | 15.3 | 348 |
| 4. Change in closeness to maternal grandfather | 60.2 | 23.2 | 16.6 | 213 |
| 5. Change in closeness to paternal grandmother | 67.6 | 11.8 | 20.6 | 307 |
| 6. Change in closeness to paternal grandfather | 58.9 | 26.9 | 14.2 | 169 |
| <u>Independent Variables</u> | | | | |
| 7. Change in mother-child contact | 51.6 | 39.7 | 8.7 | 619 |
| 8. Change in father-child contact | 57.3 | 35.9 | 6.8 | 619 |
| 9. Change in mother-child relationship | 44.8 | 18.1 | 37.2 | 619 |
| 10. Change in father-child relationship | 46.0 | 18.1 | 36.0 | 619 |
| 11. Change in mother-grandmother relationship | 34.9 | 32.3 | 32.8 | 348 |
| 12. Change in mother-grandfather relationship | 27.6 | 30.6 | 41.8 | 213 |
| 13. Change in father-grandmother relationship | 27.1 | 27.0 | 45.9 | 307 |
| 14. Change in father-grandfather relationship | 25.6 | 44.0 | 30.4 | 169 |
| 15. Change in mother-mother-in-law relationship | 27.9 | 28.7 | 43.4 | 307 |
| 16. Change in mother-father-in-law relationship | 39.0 | 18.7 | 42.3 | 169 |
| 17. Change in father-mother-in-law relationship | 34.5 | 24.6 | 40.9 | 348 |
| 18. Change in father-father-in-law relationship | 29.4 | 27.4 | 43.1 | 213 |

Note: Weighted percentages are shown.

Table 2.5. Ordinary Least Squares Regression Results for Contact with Grandparents at Wave 3.

| Variables | Maternal Grandparents: Model 1 | | | Paternal Grandparents: Model 2 | | | Paternal Grandparents: Model 3 | | |
|--|-----------------------------------|-------------|---------|-----------------------------------|-------------|---------|-----------------------------------|-------------|---------|
| | <i>B</i> | <i>SE B</i> | β | <i>B</i> | <i>SE B</i> | β | <i>B</i> | <i>SE B</i> | β |
| Mother-child contact | .50 | .29 | .09† | | | | .22 | .06 | .21*** |
| Father-child contact | | | | .19 | .05 | .22*** | | | |
| Mother-child relationship | -.12 | .20 | -.03 | -.13 | .06 | -.17* | -.14 | .06 | -.18* |
| Father-child relationship | -.21 | .18 | -.06 | .02 | .04 | .02 | .05 | .04 | .07 |
| Granddaughter | .11 | .43 | .01 | -1.25 | .61 | -.69* | -1.24 | .61 | -.68* |
| Grandchild's age | .01 | .06 | .01 | -.03 | .01 | -.12† | -.03 | .01 | -.12† |
| White | -1.12 | .72 | -.07 | .05 | .15 | .02 | .09 | .15 | .03 |
| Grandchild's education | -.04 | .15 | -.01 | -.02 | .03 | -.03 | -.02 | .03 | -.03 |
| Mother's education | -.01 | .12 | -.01 | -.02 | .02 | -.05 | -.02 | .02 | -.05 |
| Father's education | .01 | .11 | .01 | -.02 | .02 | -.06 | -.02 | .02 | -.05 |
| Separate residence | .27 | .59 | .03 | -.17 | .13 | -.08 | -.21 | .12 | -.10† |
| Enrollment in school | -.90 | .52 | -.09† | .16 | .11 | .08 | .15 | .11 | .08 |
| Full-time job | -.53 | .50 | -.06 | .09 | .10 | .05 | .09 | .10 | .05 |
| Married | .03 | .59 | .01 | -.03 | .13 | -.01 | -.02 | .13 | -.01 |
| Parent | -.25 | .61 | -.02 | .21 | .13 | .11 | .19 | .13 | .10 |
| Both maternal grandparents alive | .45 | .42 | .05 | | | | | | |
| Both paternal grandparents alive | | | | .11 | .09 | .06 | .13 | .09 | .07 |
| Mother-child relationship x granddaughter | | | | .15 | .07 | .71* | .14 | .07 | .67* |
| <i>R</i> ² | .03 | | | .14*** | | | .14*** | | |
| <i>Unweighted N</i> | 412 | | | 360 | | | 360 | | |

Note: *B*-unstandardized beta, β -standardized beta. Model 3 for paternal grandparents with mother-child contact instead of father-child contact.

† $\leq .10$. * $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

**Table 2.6. Ordinary Least Squares Regression Results for
Change in Contact with Grandparents between Waves 2 and 3.**

| Variables | Maternal Grandparents: Model 1 | | | Paternal Grandparents: Model 2 | | |
|---|-----------------------------------|-------------|---------|-----------------------------------|-------------|---------|
| | <i>B</i> | <i>SE B</i> | β | <i>B</i> | <i>SE B</i> | β |
| Change in mother-child contact | .05 | .07 | .04 | | | |
| Change in father-child contact | | | | .10 | .07 | .09 |
| Change in mother-child relationship | -.09 | .04 | -.11* | -.02 | .05 | -.02 |
| Change in father-child relationship | .01 | .04 | .02 | .05 | .04 | .06 |
| Granddaughter | .07 | .10 | .03 | -.02 | .11 | -.01 |
| Grandchild's age | -.01 | .01 | -.02 | -.01 | .02 | -.02 |
| White | .22 | .18 | .05 | -.02 | .20 | -.01 |
| Grandchild's education | .01 | .04 | .01 | -.08 | .04 | -.10† |
| Mother's education | -.06 | .03 | -.12* | .01 | .03 | .10 |
| Father's education | .06 | .03 | .14* | .06 | .03 | .14* |
| Started living alone between waves | -.25 | .12 | -.11* | -.20 | .14 | -.09 |
| Enrolled in school between waves | -.10 | .12 | -.04 | -.03 | .15 | -.01 |
| Started working full-time between waves | -.14 | .11 | -.07 | -.08 | .12 | -.03 |
| Got married between waves | .01 | .13 | .01 | .01 | .15 | .01 |
| Became a parent between waves | .07 | .14 | .03 | -.07 | .16 | -.03 |
| Both maternal grandparents alive | .25 | .10 | .11* | | | |
| Both paternal grandparents alive | | | | -.17 | .12 | -.07 |
| <i>R</i> ² | .06** | | | .05 | | |
| <i>Unweighted N</i> | 401 | | | 349 | | |

Note: *B*-unstandardized beta, β -standardized beta.

† $\leq .10$. * $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Table 2.7. Ordinary Least Squares Regression Results for Closeness to Maternal Grandparents at Wave 3.

| Variables | Grandmothers: Model 1 | | | Grandfathers: Model 2 | | | Grandfathers: Model 3 | | |
|---|-----------------------|-------------|---------|-----------------------|-------------|---------|-----------------------|-------------|---------|
| | <i>B</i> | <i>SE B</i> | β | <i>B</i> | <i>SE B</i> | β | <i>B</i> | <i>SE B</i> | β |
| Mother-child contact | .60 | .15 | .20*** | .47 | .20 | .16* | | | |
| Father-child contact | | | | | | | -.10 | .22 | -.04 |
| Mother-child relationship | .20 | .11 | .09† | .29 | .15 | .13† | .36 | .15 | .16* |
| Father-child relationship | -.33 | .13 | -.17* | -.20 | .18 | -.10 | -.25 | .18 | -.13 |
| Mother-grandmother relationship | -.01 | .07 | -.01 | | | | | | |
| Mother-grandfather relationship | | | | .35 | .08 | .26*** | .34 | .08 | .25*** |
| Father-mother-in-law relationship | .38 | .05 | .35*** | | | | | | |
| Father-father-in-law relationship | | | | .58 | .10 | .49*** | .57 | .10 | .47*** |
| Granddaughter | -4.61 | 1.48 | -.93** | -1.28 | 1.79 | -.25 | -3.40 | 2.11 | -.67 |
| Grandchild's age | -.06 | .03 | -.11† | -.09 | .05 | -.15† | -.11 | .05 | -.18* |
| White | -1.12 | .37 | .13** | -.97 | .50 | -.10† | -1.05 | .50 | -.11* |
| Grandchild's education | .09 | .08 | .06 | .19 | .12 | .10 | .18 | .12 | .20 |
| Mother's education | .13 | .06 | .11* | .17 | .07 | .15* | .15 | .08 | .14* |
| Father's education | -.16 | .06 | -.16** | -.28 | .07 | -.28*** | -.29 | .07 | -.29*** |
| Separate residence | .60 | .31 | .10† | .69 | .36 | .13† | .52 | .40 | .09 |
| Enrollment in school | -.71 | .26 | -.13** | -.19 | .33 | -.04 | -.20 | .33 | -.04 |
| Full-time job | -.36 | .25 | -.07 | -.07 | .32 | -.01 | .06 | .33 | .01 |
| Married | .58 | .30 | .11† | -.11 | .39 | -.02 | -.09 | .40 | -.02 |
| Parent | -.85 | .32 | -.15** | -.04 | .41 | -.01 | .06 | .41 | .01 |
| Both maternal grandparents alive | .35 | .21 | .07 | .44 | .30 | .07 | .48 | .31 | .08 |
| Father-child contact x granddaughter | | | | | | | .49 | .27 | .41* |
| Father-child relationship x granddaughter | .38 | .16 | .62* | .50 | .22 | .81* | .52 | .22 | .83* |
| Mother-grandmother relationship x granddaughter | .23 | .10 | .41* | | | | | | |
| Father-father-in-law relationship x granddaughter | | | | -.39 | .13 | -.62** | -.37 | .13 | -.59** |
| <i>R</i> ² | .28*** | | | .38*** | | | .37*** | | |
| <i>Unweighted N</i> | 354 | | | 219 | | | 219 | | |

Note: *B*-unstandardized beta, β -standardized beta. Model 3 for grandfathers with father-child contact instead of mother-child contact.

† $\leq .10$. * $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

**Table 2.8. Ordinary Least Squares Regression Results for
Change in Closeness to Maternal Grandparents between Waves 2 and 3.**

| Variables | Grandmothers: Model 1 | | | Grandfathers: Model 2 | | | Grandfathers: Model 3 | | |
|---|-----------------------|-------------|---------|-----------------------|-------------|---------|-----------------------|-------------|---------|
| | <i>B</i> | <i>SE B</i> | β | <i>B</i> | <i>SE B</i> | β | <i>B</i> | <i>SE B</i> | β |
| Change in mother-child contact | -.02 | .19 | -.01 | .02 | .22 | .01 | | | |
| Change in father-child contact | | | | | | | -.55 | .27 | -.20* |
| Change in mother-child relationship | -.08 | .14 | -.04 | .19 | .15 | .09 | .21 | .14 | .10 |
| Change in father-child relationship | .21 | .09 | .12* | .30 | .13 | .15* | .30 | .13 | .16* |
| Change in mother-grandmother relationship | .08 | .06 | .06 | | | | | | |
| Change in mother-grandfather relationship | | | | .18 | .11 | .11† | .16 | .11 | .09 |
| Change in father-mother-in-law relationship | .26 | .06 | .21*** | | | | | | |
| Change in father-father-in-law relationship | | | | .22 | .10 | .13* | .26 | .10 | .15* |
| Granddaughter | .61 | .26 | .13* | .52 | .33 | .10 | 1.37 | .42 | .26** |
| Grandchild's age | .06 | .03 | .12* | .10 | .05 | .16* | .09 | .05 | .14† |
| White | -.48 | .37 | -.06 | -.53 | .60 | -.05 | -.41 | .59 | -.04 |
| Grandchild's education | .19 | .08 | .13* | .16 | .14 | .08 | .19 | .14 | .10 |
| Mother's education | .15 | .06 | .14* | .13 | .09 | .12 | .09 | .09 | .08 |
| Father's education | -.14 | .06 | -.15* | -.14 | .08 | -.14† | -.13 | .08 | -.13 |
| Started living alone between waves | .22 | .26 | .05 | .32 | .38 | .06 | .28 | .40 | .05 |
| Enrolled in school between waves | -.20 | .26 | -.04 | -.30 | .39 | -.06 | -.30 | .39 | -.06 |
| Started working full-time between waves | .08 | .22 | .02 | .46 | .34 | .09 | .48 | .33 | .09 |
| Got married between waves | -.21 | .28 | -.04 | -.76 | .43 | -.12† | -.56 | .43 | -.09 |
| Became a parent between waves | -.98 | .29 | -.18** | -.84 | .49 | -.12† | -.91 | .49 | -.13† |
| Both maternal grandparents alive | -.07 | .22 | -.02 | .36 | .36 | .06 | .49 | .36 | .08 |
| Change in mother-child contact x granddaughter | .44 | .24 | .13† | | | | | | |
| Change in father-child contact x granddaughter | | | | | | | 1.01 | .33 | .31** |
| Change in mother-child relationship x granddaughter | .35 | .17 | .14* | | | | | | |
| <i>R</i> ² | .18*** | | | .21*** | | | .24*** | | |
| <i>Unweighted N</i> | 348 | | | 213 | | | 213 | | |

Note: *B*-unstandardized beta, β -standardized beta. Model 3 for grandfathers with father-child contact instead of mother-child contact.

† $\leq .10$. * $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Table 2.9. Ordinary Least Squares Regression Results for Closeness to Paternal Grandparents at Wave 3.

| Variables | Grandmothers: Model 1 | | | Grandfathers: Model 2 | | |
|---|-----------------------|-------------|---------|-----------------------|-------------|---------|
| | <i>B</i> | <i>SE B</i> | β | <i>B</i> | <i>SE B</i> | β |
| Mother-child contact | | | | | | |
| Father-child contact | .02 | .16 | .01 | -.10 | .22 | -.04 |
| Mother-child relationship | -.15 | .13 | -.07 | .28 | .17 | .12 |
| Father-child relationship | .04 | .17 | .02 | .10 | .15 | .05 |
| Father-grandmother relationship | .23 | .07 | .19** | | | |
| Father-grandfather relationship | | | | .04 | .12 | .03 |
| Mother-mother-in-law relationship | .29 | .06 | .26*** | | | |
| Mother-father-in-law relationship | | | | .39 | .08 | .35*** |
| Granddaughter | -3.45 | 1.58 | -.66* | -3.44 | 1.16 | -.61** |
| Grandchild's age | .01 | .04 | .02 | -.13 | .06 | -.18* |
| White | -.19 | .44 | -.02 | -1.15 | .65 | -.10† |
| Grandchild's education | .23 | .10 | .12* | .01 | .16 | .01 |
| Mother's education | -.05 | .07 | -.04 | .09 | .09 | .07 |
| Father's education | -.06 | .07 | -.06 | -.02 | .09 | -.02 |
| Separate residence | -.45 | .37 | -.07 | -.80 | .50 | -.13 |
| Enrollment in school | 1.12 | .32 | .20** | .69 | .45 | .12 |
| Full-time job | .12 | .29 | .02 | .60 | .41 | .11 |
| Married | -.05 | .37 | -.01 | -.14 | .55 | -.02 |
| Parent | .21 | .38 | .04 | .75 | .56 | .11 |
| Both paternal grandparents alive | .25 | .26 | .05 | .15 | .41 | .02 |
| Father-child relationship x granddaughter | .38 | .20 | .59* | | | |
| Father-grandfather relationship x granddaughter | | | | .35 | .15 | .51* |
| <i>R</i> ² | .23*** | | | .37*** | | |
| <i>Unweighted N</i> | 316 | | | 177 | | |

Note: *B*-unstandardized beta, β -standardized beta.

† $\leq .10$. * $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

**Table 2.10. Ordinary Least Squares Regression Results for
Change in Closeness to Paternal Grandparents between Waves 2 and 3.**

| Variables | Grandmothers: Model 1 | | | Grandfathers: Model 2 | | |
|---|-----------------------|-------------|---------|-----------------------|-------------|---------|
| | <i>B</i> | <i>SE B</i> | β | <i>B</i> | <i>SE B</i> | β |
| Change in mother-child contact | | | | | | |
| Change in father-child contact | -.21 | .15 | -.08 | -.30 | .19 | -.13 |
| Change in mother-child relationship | -.28 | .16 | -.15† | .24 | .15 | .13 |
| Change in father-child relationship | .15 | .10 | .09 | .22 | .12 | .14† |
| Change in father-grandmother relationship | .14 | .08 | .10† | | | |
| Change in father-grandfather relationship | | | | .28 | .10 | .19** |
| Change in mother-mother-in-law relationship | .16 | .07 | .13* | | | |
| Change in mother-father-in-law relationship | | | | .24 | .07 | .23** |
| Granddaughter | .08 | .26 | .02 | -.53 | .33 | -.11 |
| Grandchild's age | .15 | .04 | .26*** | .05 | .06 | .08 |
| White | .08 | .44 | .01 | -.27 | .67 | -.03 |
| Grandchild's education | .09 | .10 | .05 | -.10 | .15 | -.06 |
| Mother's education | .07 | .07 | .06 | .02 | .09 | .02 |
| Father's education | -.05 | .07 | -.05 | -.05 | .09 | -.05 |
| Started living alone between waves | -.54 | .33 | -.10† | -.59 | .43 | -.12 |
| Enrolled in school between waves | .59 | .33 | .11† | -.36 | .44 | -.07 |
| Started working full-time between waves | -.01 | .28 | .01 | -.08 | .39 | -.02 |
| Got married between waves | -.25 | .34 | -.04 | .29 | .52 | .05 |
| Became a parent between waves | .03 | .35 | .01 | -.05 | .53 | -.01 |
| Both paternal grandparents alive | .19 | .27 | .04 | .43 | .40 | .07 |
| Change in mother-child relationship x granddaughter | .53 | .20 | .21** | | | |
| R^2 | .15*** | | | .23*** | | |
| <i>Unweighted N</i> | 307 | | | 169 | | |

Note: *B*-unstandardized beta, β -standardized beta.

† $\leq .10$. * $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Table 2.11. Summary Table of Ordinary Least Squares Regression Findings for Cross-Sectional Analysis.

| | Contact with maternal grandparents | Contact with paternal grandparents | Closeness to maternal grandmother | Closeness to maternal grandfather | Closeness to paternal grandmother | Closeness to paternal grandfather |
|-----------------------------------|------------------------------------|--|--|-----------------------------------|-----------------------------------|-----------------------------------|
| Mother-child contact | yes(+) | yes(+) | yes(+) | yes(+) | no | no |
| Father-child contact | no | yes(+) | no | yes(+) for granddaughters | no | no |
| Mother-child relationship | no | yes(+) for granddaughters and (-) for grandsons | yes(+) | yes(+) | no | no |
| Father-child relationship | no | no | yes(+) for granddaughters and (-) for grandsons | yes(+) for granddaughters | yes(+) for granddaughters | no |
| Mother-grandmother relationship | | | yes(+) for granddaughters | | | |
| Mother-grandfather relationship | | | | yes(+) | | |
| Father-grandmother relationship | | | | | yes(+) | |
| Father-grandfather relationship | | | | | | yes(+) for granddaughters |
| Mother-mother-in-law relationship | | | | | yes(+) | |
| Mother-father-in-law relationship | | | | | | yes(+) |
| Father-mother-in-law relationship | | | yes(+) | | | |
| Father-father-in-law relationship | | | | yes(+) for grandsons | | |

yes – there was a statistically significant association between an independent variable and a dependent variable.

no – there was no statistically significant association between an independent variable and a dependent variable.

☐ - not applicable: the independent variable was not included in the model for this dependent variable.

(+) – positive association between an independent variable and a dependent variable.

(-) – negative association between an independent variable and a dependent variable.

Table 2.12. Summary Table of Ordinary Least Squares Regression Findings for Longitudinal Analysis.

| | Change in contact with maternal grandparents | Change in contact with paternal grandparents | Change in closeness to maternal grandmother | Change in closeness to maternal grandfather | Change in closeness to paternal grandmother | Change in closeness to paternal grandfather |
|---|--|--|---|--|---|---|
| Change in mother-child contact | no | no | yes(+) for granddaughters | no | no | no |
| Change in father-child contact | no | no | no | yes(+) for granddaughters and (-) for grandsons | no | no |
| Change in mother-child relationship | yes(-) | no | yes(+) for granddaughters | no | yes(-) for grandsons | no |
| Change in father-child relationship | no | no | yes(+) | yes(+) | no | yes(+) |
| Change in mother-grandmother relationship | | | no | | | |
| Change in mother-grandfather relationship | | | | yes(+) | | |
| Change in father-grandmother relationship | | | | | yes(+) | |
| Change in father-grandfather relationship | | | | | | yes(+) |
| Change in mother-mother-in-law relationship | | | | | yes(+) | |
| Change in mother-father-in-law relationship | | | | | | yes(+) |
| Change in father-mother-in-law relationship | | | yes(+) | | | |
| Change in father-father-in-law relationship | | | | yes(+) | | |

yes – there was a statistically significant association between an independent variable and a dependent variable.

no – there was no statistically significant association between an independent variable and a dependent variable.

□ - not applicable: the independent variable was not included in the model for this dependent variable.

(+) – positive association between an independent variable and a dependent variable.

(-) – negative association between an independent variable and a dependent variable.

Table 2.13. Summary of Theoretical Findings: Cross-Sectional Sample.

| Hypothesis | Support |
|--|---------|
| <u>Parents' Ties to their Offspring</u> | |
| <p>H1.1: Stronger mother-child ties will be associated with better relationships between young adults and their maternal grandmother/grandfather.</p> <p><i>Findings:</i> Yes – for mother-child contact and contact with/closeness to both maternal grandparents. Yes – for the mother-child relationship and closeness to both maternal grandparents. No – only for the mother-child relationship and contact with maternal grandparents.</p> | Yes |
| <p>H2.1: Stronger father-child ties will be associated with better relationships between young adults and their paternal grandmother/grandfather.</p> <p><i>Findings:</i> Yes – for the father-child contact and contact with paternal grandparents. Yes – for the father-child relationship and closeness to paternal grandmothers for granddaughters.</p> | Partial |
| <u>Parents' Ties to their Own Parents</u> | |
| <p>H3.1: Stronger mother-maternal grandparent relationships will be associated with better relationships between young adults and this maternal grandparent.</p> <p><i>Findings:</i> Yes – for the mother-grandmother relationship and closeness to maternal grandmothers for granddaughters. Yes – for the mother-grandfather relationship and closeness to maternal grandfathers</p> | Yes |
| <p>H4.1: Stronger father-paternal grandparent relationships will be associated with better relationships between young adults and this paternal grandparent.</p> <p><i>Findings:</i> Yes – for the father-grandmother relationship and closeness to paternal grandmothers. Yes – for the father-grandfather relationship and closeness to paternal grandfathers for granddaughters.</p> | Yes |

Table 2.13. Continued.

| Hypothesis | Supported |
|---|-----------|
| <u>Parents' Ties to their Parents-in-Law</u> | |
| H5.1: Stronger mother-parent-in-law relationships will be associated with better relationships between young adults and this paternal grandparent. | Yes |
| <i>Findings:</i> Yes – for the mother-mother-in-law relationship and closeness to paternal grandmothers. Yes – for the mother-father-in-law relationship and closeness to paternal grandfathers. | |
| H6.1: Stronger father-parent-in-law relationships will be associated with better relationships between young adults and this maternal grandparent. | Yes |
| <i>Findings:</i> Yes – for the father-mother-in-law relationship and closeness to maternal grandmothers. Yes – for the father-father-in-law relationship and closeness to maternal grandfathers for grandsons. | |
| <u>Grandchild's Gender</u> | |
| H7.1: The association between the mother's intergenerational relationships in the family and young adults' closeness to, and contact with, grandparents is stronger for granddaughters than for grandsons. | Limited |
| <i>Findings:</i> The mother-child relationship was associated with more frequent contact with paternal grandparents for granddaughters. The mother-maternal grandmother relationship was associated with closer relationships with maternal grandmothers for granddaughters. | |
| H8.2: The association between the father's intergenerational relationships in the family and young adults' closeness to, and contact with, grandparents is stronger for grandsons than for granddaughters. | Limited |
| <i>Findings:</i> The father-father-in-law relationship was associated with closer relationships to maternal grandfathers for grandsons. | |

Table 2.14. Summary of Theoretical Findings: Longitudinal Sample.

| Hypothesis | Support |
|--|---------|
| <u>Parents' Ties to their Offspring</u> | |
| <p>H1.2: Improvements in mother-child ties will be associated with improvements in relationships between young adults and their maternal grandmother/grandfather.</p> <p><i>Findings:</i> Yes – only for changes in mother-child contact/relationships and changes in closeness to maternal grandmothers for granddaughters.</p> <p><i>Contrary to H1:</i> Negative association between changes in the mother-child relationship and changes in contact with maternal grandparents.</p> | Partial |
| <p>H2.2: Improvements in father-child ties will be associated with improvements in relationships between young adults and their paternal grandmother/grandfather.</p> <p><i>Findings:</i> Yes – only for changes in the father-child relationship and changes in closeness to paternal grandfather.</p> | Partial |
| <u>Parents' Ties to their Own Parents</u> | |
| <p>H3.2: Improvements in the mother-maternal grandparent relationship will be associated with improvements in relationships between young adults and this maternal grandparent.</p> <p><i>Findings:</i> Yes – only for changes in the mother-grandfather relationship and changes in closeness to maternal grandfathers.</p> | Partial |
| <p>H4.2: Improvements in the father-paternal grandparent relationship will be associated with improvements in relationships between young adults and this paternal grandparent.</p> <p><i>Findings:</i> Yes – for changes in the father-grandmother relationship and changes in closeness to paternal grandmothers. Yes – for changes in the father-grandfather relationship and changes in closeness to paternal grandfathers.</p> | Yes |

Table 2.14. Continued.

| Hypothesis | Support |
|---|---------|
| <u>Parents' Ties to their Parents-in-Law</u> | |
| H5.2: Improvements in the mother-parent-in-law relationship will be associated with improvements in relationships between young adults and this paternal grandparent. | Yes |
| <i>Findings:</i> Yes – for changes in the mother-mother-in-law relationship and changes in closeness to paternal grandmothers. Yes – for changes in the mother-father-in-law relationship and changes in closeness to paternal grandfathers. | |
| H6.2: Improvements in the father-parent-in-law relationship will be associated with improvements in relationships between young adults and this maternal grandparent. | Yes |
| <i>Findings:</i> Yes – for changes in the father-mother-in-law relationship and changes in closeness to maternal grandmothers. Yes – for changes in the father-father-in-law relationship and changes in closeness to maternal grandfathers. | |
| <u>Grandchild's Gender</u> | |
| H7.2: The association between changes in the mother's intergenerational relationships in the family and changes in young adults' closeness to, and contact with, grandparents is stronger for granddaughters than for grandsons. | Limited |
| <i>Findings:</i> Improvements in mother-child contact/relationship were associated with improvements in closeness to maternal grandmothers only for granddaughters. | |
| H8.2: The association between changes in the father's intergenerational relationships in the family and changes in young adults' closeness to, and contact with, grandparents is stronger for grandsons than for granddaughters. | No |
| <i>Findings:</i> None | |

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CHAPTER 3

GRANDCHILDREN'S ADULT ROLES AND THE GRANDPARENT-GRANDCHILD RELATIONSHIP

Introduction

Because of recent increases in life expectancy, grandparents today live long enough to see their grandchildren become adults (Giarrusso, Silverstein, & Bengtson, 1996; Silverstein & Marengo, 2001). Grandparents' ties to adult grandchildren, similar to grandparents' relationships with younger grandchildren, are important for several reasons. Grandparent-grandchild relationships can influence individuals' overall well-being as well as provide them with a sense of continuity and stability (Elder & Conger, 2000). Adult grandchildren and their grandparents are also potential sources of various types of assistance to each other, such as advice, caregiving, financial and emotional support (Ashton, 1996; Bengtson, 2001; Hamon, 1995; Harwood & Lin, 2000). As grandparents get older, grandchildren can become primary caregivers or at least, co-caregivers for the grandparent generation. The availability of assistance for older generations, however, can be contingent on life course events in younger generations in the family (Erlanger, 1997).

In general, extant research on the grandparent-adult grandchild bond indicates that grandparents and adult grandchildren view their relationships with each other as important and influential (Hodgson, 1992; Giarrusso, Feng, Silverstein, & Bengtson, 2001; Harwood & Lin, 2000; Langer, 1990). Previous research also suggests that this relationship is dynamic (Cherlin & Furstenberg, 1986; Hodgson, 1998; Silverstein & Long, 1998; Silverstein & Marengo, 2001). It is necessary, therefore, to investigate

factors that affect grandparent-grandchild interactions over the life course.

Grandchildren's adult roles are likely important among these factors. Prior research, however, has not addressed extensively whether grandchildren's adult roles are consequential for the grandparent-grandchild relationship (for two exceptions see Crosnoe & Elder, 2002 and Mills, 1999). Relationships between grandchildren and their grandparents, for example, are likely to be renegotiated when grandchildren reach young adulthood. Young adults usually become economically independent and their concerns shift from their family of origin to career advancement and their family of procreation. Young adults may distance themselves emotionally and physically from their family of origin, including their grandparents, due to time and energy constraints related to their new responsibilities. Alternatively, they may develop closer relationships with their grandparents because similar experiences related to adult roles can help adult grandchildren better understand their grandparents and because grandchildren's adult roles can be viewed as positive events in their lives by other family members.

The main goal of the present research is to examine whether and how grandchildren's adult roles are related to their perceptions of contact with, and closeness to, their grandparents. Drawing on data from Wave 3 of the National Survey of Families and Households, this study examines residential independence, school enrollment, full-time employment, marriage, and parenthood among young adults (ages 18-34). In an area of very limited research, this study advances knowledge by focusing on young adults' relationships with all living grandparents, by considering a different group of grandchildren from those in the extant literature, and by assessing whether the association

between grandchildren's adult roles and the grandparent-grandchild bond varies for grandsons and granddaughters.

Theoretical Background

Linked Lives

This study is guided by the life course perspective and draws on one of the key concepts of this theoretical framework – *linked lives*. This concept implies that life courses of family members are embedded in kinship relationships (Elder, 1985, 1991, 1994). That is, the consequences of life course events can extend beyond a particular individual by affecting others in the family (Elder, 1985; Elder, Johnson, & Crosnoe, 2003; Hagestad, 1981). The life course perspective suggests, therefore, that grandchildren's adult roles can have implications for the grandparent-adult grandchild bond.

The life course perspective provides a strong basis from which to argue that grandchildren's adult roles can have implications for the grandparent-grandchild relationship. Two other perspectives, Rosow's role framework and the intergenerational similarity hypothesis paired with the family stress model, are useful for stipulating specific mechanisms through which grandchildren's relationships with their grandparents are shaped by grandchildren's adult roles. More specifically, these theoretical perspectives offer two contradictory approaches to understanding grandchildren's adult roles. Rosow's role framework suggests that grandchildren distance themselves from their grandparents when they occupy adult roles, whereas the intergenerational similarity hypothesis and the family stress theory state that grandchildren's adult roles bring grandparents and grandchildren closer to each other.

The Role Framework

Rosow (1985) proposed the role framework for examining the interrelatedness between different types of roles throughout the life course. According to Rosow (1985), there are four major role types: the institutional, the tenuous, the informal, and the non-role¹. The role framework suggests that these types of roles stand in relation to one another dynamically across the life course. The tenuous role is particularly useful for examining the association between grandchildren's adult roles and the grandparent-grandchild relationship. Roles of a grandparent and grandchild can be considered tenuous or ambiguously defined roles, because they are not regulated by definite behavioral norms, expectations and guidelines. Moreover, the rights and obligations of grandparents and grandchildren with respect to one another are unclear (Bengtson, 1985; Hagestad, 1985; Wood, 1982).

Rosow's role framework indicates that tenuous roles such as grandchild become less important to individuals when they acquire roles that are better regulated by social norms (e.g., adult roles of worker, spouse, or parent; Rosow, 1985). Because of a greater number of explicit expectations and responsibilities attached to them, grandchildren's adult roles can potentially have adverse consequences for the grandparent-adult grandchild bond. In other words, the role of grandchild may become less salient to

¹ Institutional roles are the major institutionalized statuses with roles (e.g., men, women, professional, manual workers, parents, children, Catholics, Baptists, public officials, organizational members, race, ethnicity). The normative expectations for institutional roles are clearly defined (Rosow, 1985, p. 68). According to Rosow (1985), tenuous roles consist of "definite social positions without roles or with only vague, insubstantial ones" (e.g., Nobel laureates, the elderly, divorcees, the chronically unemployed; p. 68). There are only few normative guidelines attached to tenuous roles. Unlike tenuous roles, informal roles represent role behavior that is not connected with any specific status or position. These roles, however, have social functions that are associated with a particular person or subgroup. The examples of the informal roles are tough guys, blackmailers, prima donnas, and confidants (Rosow, 1985, p. 73). The non-role is a mixture of idiosyncratic behavior, personality factors, personal style, and so on, that does not have any significant patterned social consequences (Rosow, 1985, pp. 74-75).

individuals when they acquire adult roles due to a limited amount of energy and time that they have for maintaining relationships with other family members. Conversely, grandchildren who “fail” to acquire an adult role (e.g., living with parents, being not employed, single, or childless) have fewer competing responsibilities and, therefore, more time and energy to devote to their interactions with grandparents.

The Intergenerational Similarity Hypothesis and the Family Stress Model

Bengtson and Black (1973) proposed the intergenerational similarity hypothesis to understand the implications of offspring’s adult roles for the parent-child relationship. Bengtson and Black (1973) argue that offspring’s adult roles can strengthen the parent-child bond. Sharing similar role experiences as worker, spouse, and/or parent, offspring are more able to identify with their parents and often grow in their understanding of, and appreciation for, their parents. The intergenerational similarity hypothesis can be extended beyond the parent-child relationship to the grandparent-grandchild relationship as well. Grandchildren’s adult roles can also create extra linkages between the grandparent and grandchild generations. Alternatively, grandchildren who fail to acquire an adult role may have less in common with their grandparents.

Intergenerational relationships in the family may be contingent not only on similarity/dissimilarity in adult roles between younger and older generations but also on evaluations (i.e., positive vs. negative) of these roles by family members. According to Reuben Hill’s (1958) family stress model and to the extension of this model by McCubbin and Patterson (1983), different events in people’s lives can alter relationships between family members by creating stress. However, the direction of change in these relationships depends on how relevant stressors are perceived by family members. More

specifically, the family stress model suggests that although grandchildren's adult roles cause stress, they can be viewed as positive events in young adults' lives and therefore, they can be associated with stronger grandparent-grandchild relationships. On the other hand, grandchildren's failure to acquire an adult role can be perceived negatively by their grandparents and as a result, can be related to weaker grandparent-grandchild ties.

It should be also noted that similarity in roles between generations and positive evaluation of these roles by family members may not always line up. For example, grandchildren can experience adult roles that were not experienced by their grandparents (e.g., enrollment in higher education or full-time employment). These roles, however, can be viewed positively by older generations in the family and therefore, can be related to stronger intergenerational ties between family members.

Prior Research

In general, few previous studies have investigated possible linkages between grandchildren's adult roles and the grandparent-grandchild relationship. Studies by Mills (1999) and Crosnoe and Elder (2002) are the only exceptions and provide an important foundation from which to build further understanding of grandparents' relationships with adult grandchildren. Drawing on pooled data from five waves of the Longitudinal Study of Generations (1971-1994), Mills (1999) examined whether grandchildren's transitions to adult roles (i.e., role acquisitions and role exits) have implications for intergenerational solidarity between grandchildren and grandparents. Because the study grandchildren were born between 1941 and 1954, Mills (1999) defined them as babyboomers. Their age ranged from 19 to 55 years old across the waves. Mills (1999) investigated four role acquisitions (i.e., getting a job, getting married, becoming a parent, and remarriage after

divorce), two role exits (i.e., job lay-offs and divorces) and three dimensions of intergenerational solidarity between grandchildren and grandparent (i.e., association/contact, affectual solidarity/closeness, and consensus/similarity in ideals, values, and opinions).

Mills's (1999) study specifically tested Rosow's role framework and found mixed support for this theoretical perspective. In particular, grandchildren's role acquisitions were not necessarily associated with declines in intergenerational solidarity between grandparents and grandchildren, while grandchildren's role losses did not always predict increased intergenerational solidarity. For example, consistent with Rosow's role framework, getting or having a job was predictive of decreased association with grandparents, and divorce was related to increased association with grandparents. However, contrary to Rosow's role framework, a grandchild's first marriage predicted increased association with grandparents, while a grandchild's loss of a job was related to a decline in association with grandparents (Mills, 1999). The latter findings seem to provide some support for the argument of the intergenerational similarity hypothesis that grandchildren's adult roles can strengthen the grandparent-grandchild bond and for the family stress model that evaluations of events also matter.

Mills's research (1999) also demonstrated that the direction of the effect of a specific role transition was different for different dimensions of intergenerational solidarity and was contingent on the gender of the grandparent. For instance, becoming a parent decreased association and consensus with grandmothers and decreased affectual solidarity with grandfathers. On the other hand, parenthood increased association and

consensus with grandfathers and increased affectual solidarity with grandmothers (Mills, 1999).

Similar to Mills's (1999) research, Crosnoe and Elder's (2002) study provided some support for the contention of the intergenerational similarity hypothesis and the family stress model that grandchildren's acquisition of adult roles can be related to stronger grandparent-grandchild ties. Crosnoe and Elder (2002) used as the starting point of their research the 1994 survey of the Iowa Youth and Families Project when the study grandchildren were seniors in high school and, as the end point for grandchildren's reports, the 1997 survey. They found that both grandchildren and grandparents reported better relationship quality when the grandchild transitioned to higher education. The role of college student was absent from Mills's (1999) earlier study. Crosnoe and Elder (2002) recognized, however, that their findings might not be generalizable to the entire U.S. population. The results of their study might be specific to tightly-knit families in rural Iowa where higher education has become crucial for adult success.

Contrary to Rosow's role framework and the intergenerational similarity hypothesis paired with the family stress model, Crosnoe and Elder (2002) found that grandchildren's other role acquisitions were not predictive of the grandparent-grandchild relationship. This may have been due to the limited age range of the study grandchildren, however. Few college-age individuals marry, become parents, and obtain a more or less permanent full-time job within two-to-three years after finishing high school.

Despite the findings of the few available studies that grandchildren's transitions to adult roles are associated with the grandparent-grandchild relationship, understanding of these associations is far from complete. In addition, the extant literature in this area has

some limitations that the present study attempts to address. First, prior research has focused on the short-term effects of grandchildren's transitions into adult roles (i.e., role entries and exits) and did not consider whether grandchildren's occupation of adult roles, regardless of when they transitioned to these roles, matter for the grandparent-grandchild relationship. It is possible that some potential consequences of grandchildren's transitions to adult roles on the grandparent-grandchild bond do not take effect immediately and can appear in a few years. Second, the present study examines adult grandchildren's relationships with all available grandparents and differentiates between maternal and paternal grandparents, whereas prior research has not investigated grandchildren's ties to all living grandparents. The results of the previous studies may not be generalized from the specific relationship to other relationships. Research that assesses grandchildren's relationships with all living grandparents can provide a more complete picture of variations in these relationships. Third, the current study considers a different group of grandchildren (ages 18 - 34, born in the late 60s – early 80s) in order to see whether the results of prior research on baby-boomer grandchildren (ages 19 – 55, born in the early 1940s – mid-50s; Mills, 1999) and on college-age grandchildren from rural families in Iowa (born in the mid-1970s; Crosnoe & Elder, 2002) will hold for other groups of grandchildren. Fourth, previous studies have not addressed whether the grandchild's gender moderates the association between grandchildren's adult roles and the grandparent-grandchild relationship. Research is necessary to investigate this issue because the acquisition of adult roles is experienced differently by men and women (Hogan & Astone, 1986; Mahaffy, 2003).

Gender has implications for the process, timing, and consequences of transitions into adult roles due to gender role socialization, cultural norms, and structural factors. For instance, in spite of the increase in women's participation in the labor force and changes in gender ideology, work roles are still socially considered to be more salient for men while family roles are for women. In addition, economic and family structures rely more heavily on women's unpaid labor in the home than on men's labor. In other words, men and women can face different time demands and constraints related to adult roles.

Drawing on data from time budget surveys conducted from 1985 to 1992 in nine industrialized countries, Gauthier and Furstenberg (2002), for instance, found some gender differentials in time use of young adults ages 18 to 34 during the transition to adulthood. In particular, transitions to partnership and parenthood were associated with major increases in time devoted to routine housework (e.g., cooking, cleaning, and child care) for women and only small increases for men in all nine countries. In contrast, after the transition to parenthood, time devoted to paid work decreased for women in all study countries and increased for men in some countries, including the U.S. It is still unknown, however, whether these gender differences in time constraints related to adult roles matter for the grandparent-adult grandchild bond.

Additional Factors Related to the Grandparent-Grandchild Bond

The present study examines associations between grandchildren's adult roles and grandparent-grandchild ties controlling for a number of other factors. The current research includes several sociodemographic characteristics of grandchildren and their parents: grandchild's age, race, number of siblings, education and income, parent's education, and parental marital status. Grandchild's age may reflect different life course

changes (e.g., general maturation or psychological changes) that unlike their older counterparts, younger grandchildren in the sample had not experienced yet. Recall that the age range of the study grandchildren is 18 - 34 years. Compared to non-Black grandchildren, Black grandchildren have been found to have stronger ties with their grandparents (e.g., Ashton, 1996; Lawton et al., 1994; Wiscott & Kopera-Frye, 2000). Siblings may strengthen grandparent-grandchild ties by providing additional opportunities for their interactions with each other. Having more siblings, however, may also have an adverse effect on the grandparent-grandchild relationship because siblings may “compete” for grandparents’ attention and time. Grandchild’s education and income as well as parent’s education capture socioeconomic status of grandchildren and their families of origin. Higher socioeconomic status may be an indicator of more resources available to young adults for interactions with their grandparents.

The present study also takes into account whether the young adult’s biological parents were married to each other. Married biological parents may have more opportunities to mediate relationships between their offspring and grandparents (i.e., their own parents and their parents-in-law). The present study did not consider parents’ relationships with the grandparent and grandchild generations because these measures were not available for all young adults in the sample. Preliminary work, however, indicated that the results for grandchildren’s adult roles were not affected by having measures of parents’ intergenerational relationships, at least for the subgroups for which they were available. Additionally, this research controls for whether the availability of the second grandparent of a given lineage may facilitate grandparent-grandchild interactions. Yet, the present study is unable to control for other grandparents’

characteristics because information on these characteristics was available only for certain grandparents, depending on marital status of young adults' parents.

Hypotheses

The present study draws on two contradictory theoretical approaches in order to examine the association between grandchildren's adult roles and the grandparent-grandchild relationship: the role framework and the intergenerational similarity perspective in combination with the family stress theory. I test two main conflicting hypotheses. Rosow's role framework motivates Hypothesis 1.

Hypothesis 1: Grandchildren's adult roles are associated with less frequent contact and less close relationships between young adults and their grandparents.

The intergenerational similarity perspective in combination with the family stress theory suggest Hypothesis 2.

Hypothesis 2: Grandchildren's adult roles are associated with more frequent contact and closer relationships between young adults and their grandparents.

This study also investigates whether the grandchild's gender can moderate the association between grandchildren's adult roles and the grandparent-grandchild relationship. Previous studies in this area do not provide much guidance. However, prior research on time use related to transitions to adult roles suggests Hypotheses 3 and 4:

Hypothesis 3: The association between grandchildren's "family" roles (i.e., marriage and parenthood) and the grandparent-grandchild relationship is stronger for granddaughters than for grandsons.

Hypothesis 4: The association between grandchildren's "non-family" roles (i.e., separate residence, enrollment in school, and full-time employment) and the grandparent-grandchild relationship is stronger for grandsons than for granddaughters.

Method

Sample

This study primarily draws on data from Wave 3 of the NSFH. Wave 1 of the NSFH was conducted in 1987-88 and included interviews with a probability sample of 13,017 respondents. The sample consisted of a main cross-section of 9,643 households and oversampling of minorities (i.e., African Americans, Puerto Ricans, Mexican Americans), one-parent families and families with stepchildren, cohabiting couples and recently married persons. The target population represented the non-institutional United States population age 19 and older (Sweet, Bumpass, & Call, 1988). At Wave 1 of the NSFH, respondents who had any biological, adopted, step (including partner's), or foster children under the age of 18 living in the household were also asked a series of questions about one of these children – the “focal child.” This child was selected if his/her name came first after all the names of the children in the household were listed alphabetically. There were two groups of focal children depending on their age (i.e., age 5-11 or 12-18; $N = 3,808$).

The sample for Wave 2 which was conducted in 1992-94, consisted of 10,008 adults from Wave 1 and included a telephone interview with the same children who were focal children at Wave 1 (Sweet & Bumpass, 1996). These children fell within one of two age groups. Telephone interviews were conducted with focal children ages 18-23 ($N = 1,090$). Shorter telephone interviews were conducted with focal children ages 10-17 ($N = 1,415$).

The sample for Wave 3 of the NSFH conducted in 2001-2003 was 7,277 adults from Waves 1 and 2 (Sweet, Bumpass, & Call, 2002). Interviews were attempted with

focal children who were age 18 and older at the time of Wave 3. These young adults were ages 18 - 34 at Wave 3. At Wave 3, interviews were completed with 869 younger focal children from Wave 2, with 654 older focal children from Wave 2 (totaling 1,523), and 429 new focal children who had not completed interviews at Wave 2 ($N = 1,952$). The new focal children were still children of primary respondents. Those retained 1,523 focal children are only 40% of the original Wave 1 focal children. Compared to those who dropped out before Wave 3, these retained focal children were more likely to be White, female, to have biological parents who were married to each other, and to report closer relationships with paternal grandfathers. The present study is based on data from interviews with all focal children at Wave 3. That is, the retained 1,523 focal children from Waves 1 and 2 and the new 429 focal children. This study refers to focal children as young adults or grandchildren.

Weights

Sampling weights are available for the NSFH data because of the complex survey design. Unstandardized coefficients were compared for weighted and unweighted data. The results were similar. This paper presents weighted estimates.

Measures

Dependent Variables

Contact with grandparents. The two contact variables measure grandchildren's contact with maternal grandparents and paternal grandparents, each as a couple. *Contact with maternal grandparents* and *contact with paternal grandparents* reflect young adults' responses to two similar questions, "During the last year, about how often did you see, talk on the telephone, or receive a letter or e-mail from your

grandmother/grandfather/grandparents on your mother's side/on your father's side?"

Response categories ranged from 1 = *not at all* to 6 = *more than once a week*.

Closeness to grandparents. Four dependent variables measuring *closeness* to each grandparent reflect young adults' responses to the question, "How would you describe your relationship with this grandparent?" Responses ranged from 0 = *not at all close* to 10 = *extremely close*. Because grandchildren reported on their relationships with none to four grandparents, depending on the number who were still alive, relationships with each grandparent were considered in turn.

Independent Variables

Five measures of grandchildren's adult roles (i.e., residential independence, school enrollment, full-time employment, marital and parenthood status) were used in the analyses. *Separate residence* measures whether young adults were living separately from their parent(s) (0 = *no*, 1 = *yes*). *Enrollment in school* captures whether grandchildren were enrolled in any kind of educational institution beyond high school (i.e., a vocational, technical, or trade school; a two-year, junior, or community college; four-year college or university; professional or graduate school; and a business college or secretarial/nursing school). It was a dichotomous variable coded 0 for *no* and 1 for *yes*. *Full-time job* captures whether young adults were employed full-time (0 = *no*, 1 = *yes*). Full-time is defined as 30 hours or more per week. *Married* measures whether grandchildren were married (0 = *no*, 1 = *yes*). *Parent* measures whether young adults had children (0 = *no*, 1 = *yes*). *Granddaughter* measures grandchild's gender. It is coded 0 for *male* and 1 for *female*.

Control Variables

A number of demographic and other control variables were also included in the analyses. *Grandchild's age* is measured in years. As no item regarding race or ethnicity was asked of the young adults or their parents at Wave 3, race/ethnicity of the parent was taken for all young adults from the interviews with the primary respondents (i.e., a parent) at Wave 1 and used as a proxy measure of grandchild's race. Preliminary analyses showed that there were significant differences in young adults' feelings of contact with, and closeness to, maternal and paternal grandmothers between Whites and other racial or ethnic groups. Therefore, *White* was a dichotomous variable (0 = *no*, 1 = *yes*). *Number of siblings* measures how many brothers and sisters, including any step- or half-siblings, young adults had. Responses ranged from 0 = *no siblings* to 4 = *4 or more siblings*.

Grandchild's education reflects the highest level of education completed by grandchildren. It is measured in years ranging 6 = *6th grade* to 20 = *doctorate*. Grandchildren's reports of their income in the previous 12 months were used to measure *grandchild's income*. Grandchild's income captures income before taxes and other deductions, including public assistance and income from other sources (e.g., grants and scholarships).

Parental education is measured in years and reflects the highest level of education completed by one of young adult's parents. About 16% of young adults at Wave 3 and about 8% of young adults at Wave 2 did not have information on parental education because their parents did not participate at these waves. Therefore, this measure was taken from interviews with the primary respondent (i.e., parent) at Wave 1. In addition,

information is not available on educational level for the other parent of some young adults because the NSFH provides information on both parents' characteristics only for the married primary respondents and their current spouses. For consistency purposes, I decided to use parental education of one parent (i.e., the primary respondent) as a proxy measure of the socioeconomic status of the young adult's family of origin. The present study also controls for marital status of young adults' parents. Three dummy variables were created on the basis of parents' reports about their marital status at Wave 3. *Parents married to each other* measures whether biological parents of young adults were married to each other. *Parents not married to each other* (reference category) captures whether biological parents of young adults were not married to each other. *Missing parental marital status* captures whether the information on parental marital status was available. Missing values for parents' marital status were not imputed for several reasons. Specifically, about sixteen percent of young adults did not have information available on their parents' marital status because their parents did not participate at Wave 3. Additionally, I decided not to impute this measure because missing interviews from grandchildren's parents may be an "indicator" of marital problems. For example, parents who did not participate at Wave 3 might have divorced and moved somewhere else and as a result, it was more difficult to locate them. *Both maternal grandparents* and *both paternal grandparents* were included in order to examine whether it matters if both grandparents of a given lineage were still alive (0 = no, 1 = yes). These measures were constructed on the basis of grandchildren's reports.

Missing Data

Except for parents' marital status, missing values on all other independent and control variables were imputed using the 'ice' command in the STATA program for multiple imputations for missing data. 'Ice' imputes missing values by using switching regression, an iterative multivariate regression technique. The proportion of missing values across study variables ranged from no missing data to 9%. The variable requiring the most imputed values was the grandchild's income. To ensure that imputed values did not bias results, other methods of accounting for missing values such as mean substitution and listwise deletion were conducted as well. The latter methods produced similar results.

Analysis

Bivariate analyses were facilitated by conducting zero-order correlations. The results are presented in Table 3.1 (p. 122). The correlations confirmed that none of the correlations among the independent variables and control variables considered in the same regression model exceeded .60. I also conducted Variance Inflation Factor (VIF) diagnostics in order to test whether any two independent and control variables operated similarly in their effect on dependent variables (the results are not shown). All the VIFs were lower than 2.0. That is, there was no multicollinearity between independent and control variables.

Models predicting contact to grandparents as a couple and closeness between grandchildren and each living grandparent were estimated separately using Ordinary Least Squares Regression (OLS). The sample size in the OLS models varied reflecting the number of respondents with each type of grandparent(s) still living. The analysis

proceeds in two steps. First, I examine whether grandchildren's adult roles predict the grandparent-grandchild bond, controlling for other factors. Second, I assess whether the association between grandchildren's adult roles and grandparent-grandchild ties varies by the gender of the grandchild (only statistically significant results are presented in Tables 3 - 5).

Results

Descriptive Statistics

Descriptive statistics is presented in Table 3.2 (p. 125). There were slightly more granddaughters (54%) in the sample than grandsons. The mean age of grandchildren was 26. The majority of young adults were White (86%). Young adults reported on contact with 1,218 maternal grandparents (62.4%) and 1,050 paternal grandparents (53.8%). Young adults rated closeness to 1,055 maternal grandmothers (54%), 655 maternal grandfathers (33.6%), 908 paternal grandmothers (46.5%), and 522 paternal grandfathers (26.7%). Overall, young adults had more frequent contact with, and felt closer to, their maternal grandparents than to their paternal grandparents. Within lineage lines, grandchildren had closer ties with their grandmothers than with their grandfathers.

Means and standard deviations with t-tests for all study variables separately for grandsons and granddaughters are presented in Tables 3.2(A) (p. 126). T-tests indicated that mean differences between granddaughters and grandsons for some measures of the grandparent-grandchild bond were statistically significant. Compared to grandsons, granddaughters had more contact with their maternal grandparents and felt closer to their maternal grandmothers. Grandsons, however, felt closer to their paternal grandfathers than did granddaughters. Also, mean differences between grandsons and granddaughters

for all the measures of grandchildren's adult roles were statistically significant.

Granddaughters were more likely than grandsons to live separately from their parents, to be enrolled in school, to be married, and to have children. On the other hand, grandsons were more likely than granddaughters to work full-time.

Regression Results

Contact with grandparents. The results for contact with maternal grandparents and with paternal grandparents are presented in Table 3.3 (p. 128). Residential independence was predictive of contact to maternal as well as paternal grandparents. Young adults who did not live with their parent(s) reported less frequent contact with their maternal ($\beta = -.12, p < .001$) and paternal ($\beta = -.10, p < .01$) grandparents. Enrollment in school had divergent effects on contact with maternal and paternal grandparents. Specifically, young adults who were enrolled in school had less frequent contact with their maternal grandparents ($\beta = -.09, p < .01$), but more frequent contact with their paternal grandparents ($\beta = .08, p < .05$). Young adults' full-time employment predicted their contact with maternal grandparents but not with paternal grandparents. Grandchildren who worked full-time reported less frequent contact with maternal grandparents ($\beta = -.06, p < .10$).

Young adults' marriage was not related to contact with either maternal or paternal grandparents. Young adults' parenthood status was consequential only for contact with paternal grandparents. Grandchildren who had children reported more frequent contact with paternal grandparents than their childless counterparts ($\beta = .12, p < .01$). The grandchild's gender predicted only contact with maternal grandparents. Compared to

grandsons, granddaughters had more frequent interactions with maternal grandparents ($\beta = .14, p < .001$).

With respect to the control variables, the grandchild's age was predictive of contact with maternal and paternal grandparents. Compared to younger grandchildren, older grandchildren reported less frequent contact with maternal ($\beta = -.07, p < .10$) and paternal ($\beta = -.18, p < .001$) grandparents. Race was related to young adults' contact only with paternal grandparents. White grandchildren had more frequent contact with paternal grandparents than non-white grandchildren ($\beta = .08, p < .05$). The number of siblings was negatively related to the frequency of contact with maternal ($\beta = -.08, p < .01$) as well as paternal ($\beta = -.07, p < .05$) grandparents.

Young adults whose parent had higher levels of education reported less frequent contact with paternal grandparents ($\beta = -.09, p < .01$). The marital status of young adults' parents was predictive of contact with paternal grandparents. Young adults whose biological parents were married to each other had more frequent interactions with their paternal grandparents ($\beta = .08, p < .01$) than those whose biological parents were not married to each other. In addition, it was consequential for young adults' contact with their grandparents whether both grandparents of a given lineage were alive. Thus, grandchildren for whom both maternal grandparents were alive and those for whom both paternal grandparents were alive had more frequent contact with their maternal ($\beta = .15, p < .001$) and paternal ($\beta = .10, p < .01$) grandparents, respectively.

Closeness to maternal grandparents. The results for closeness to maternal grandmothers and grandfathers are presented in Table 3.4 (p. 129). Enrollment in school was predictive of closeness to both maternal grandparents. Grandsons as well as

granddaughters who were enrolled in school felt less close to their maternal grandmothers ($\beta = -.14, p < .001$). Tests of interaction terms between grandchildren's adult roles and the grandchild's gender indicated that in case of closeness to maternal grandfathers, it was true only for grandsons. However, granddaughters who were enrolled in school did not feel less close to their maternal grandfathers. To investigate this finding further, models were run separately for grandsons and granddaughters. These models demonstrated that enrollment in school was significantly negatively associated with closeness to maternal grandfathers only for grandsons (the results are not shown). Other grandchildren's adult roles were not associated with young adults' closeness to their maternal grandparents. The grandchild's gender was related to closeness to maternal grandmothers. Compared to grandsons, granddaughters reported closer relationships with their maternal grandmothers ($\beta = .06, p < .10$).

Grandchild's race was associated with closeness to both maternal grandparents. White grandchildren felt less close to their maternal grandmothers ($\beta = -.12, p < .001$) and grandfathers ($\beta = -.08, p < .05$) than grandchildren of other racial/ethnic backgrounds. Parents' marital status was also related to how close young adults felt to their maternal grandparents. Specifically, young adults whose biological parents were married to each other reported less close relationships with their maternal grandmothers ($\beta = -.11, p < .01$) than those whose biological parents were not married to each other. On the other hand, young adults for whom information on their parents' marital status was missing felt closer to their maternal grandparents ($\beta = .13, p < .01$) than those whose parents were not married. Grandchildren for whom both maternal grandparents

were alive also felt closer to their maternal grandmothers ($\beta = .14, p < .001$) and grandfathers ($\beta = .15, p < .001$)

Closeness to paternal grandparents. The results for closeness to paternal grandmothers and grandfathers are presented in Table 3.5 (p. 130). Interactions terms between grandchildren's adult roles and the grandchild's gender revealed a gender difference in the effect of enrollment in school on closeness to paternal grandmothers. To examine this difference more closely, models were run separately for grandsons and granddaughters. The models demonstrated that enrollment in school was significantly positively associated with closeness to paternal grandmothers only for granddaughters ($p < .01$; the results are not shown). Unlike grandsons, granddaughters who were enrolled in school reported closer relationships with their paternal grandmothers. In addition, interaction terms indicated that full-time employment was significantly negatively associated with closeness to paternal grandfathers for granddaughters at $p < .10$. However, separate models for grandsons and granddaughters revealed that full-time employment was not predictive of closeness to paternal grandfathers for young adults of either gender (the results are not shown). Therefore, the results for the interaction term between full-time employment and the grandchild's gender are not presented. Other grandchildren's adult roles were not predictive of closeness to paternal grandparents.

The grandchild's gender was also predictive of closeness to paternal grandparents. Compared to grandsons, granddaughters reported less close relationships with their paternal grandmothers ($\beta = -.11, p < .05$) and grandfathers ($\beta = -.20, p < .001$). Older grandchildren also felt less close to their paternal grandfathers ($\beta = -.11, p < .10$). Grandchild's level of education and parental education were predictive of closeness to

paternal grandmothers. Young adults who had higher degrees felt closer to their paternal grandmothers ($\beta = .10, p < .01$). However, grandchildren whose parents had higher degrees felt less close to their paternal grandmothers ($\beta = -.09, p < .05$). Grandchildren for whom both paternal grandparents were alive felt closer to their paternal grandfathers ($\beta = .08, p < .10$).

Discussion

The primary goal of this study was to examine whether important role markers of adulthood in grandchildren's lives including residential independence, enrollment in school, full-time employment, marriage, and parenthood are related to contact and closeness between young adults and their grandparents. In support of the life-course perspective, the results of this research demonstrate that grandchildren's adult roles can have implications for the grandparent-grandchild relationship. A summary of the findings is presented in Table 3.6 (p. 131). The present study, however, did not find consistent support for Rosow's role framework or for the intergenerational similarity hypothesis in combination with the family stress model. A summary of theoretical findings is presented in Table 3.7 (p. 132). Overall, consistent with Mills's (1999) research, findings of the current study indicate that grandchildren's adult roles can have negative as well as positive consequences for intergenerational solidarity between young adults and their grandparents. More specifically, this study suggests that the association between grandchildren's adult roles and the grandparent-grandchild bond is complex, and varies by the role in question, a specific dimension of intergenerational solidarity between grandchildren and grandparents (i.e., contact vs. closeness), by lineage, and the grandchild's as well as grandparent's gender.

Grandchildren's Adult Roles

Consistent with Rosow's role framework, residential independence was associated with decreases in grandchildren's contact with grandparents, regardless of lineage or gender. Residential independence may limit time that grandchildren could spend with their grandparents by bringing new concerns and responsibilities. This finding can also be explained by decreased possibility for parents to act as mediators between their offspring and grandparents when young adults stop living with their parents. Parents can create extra opportunities for the grandparent-grandchild contact as well as encourage interactions between these two generations. Another plausible explanation for this finding is an increased geographic distance between these generations. This study, however, did not control for geographic proximity between young adults and their grandparents because this information is not available in the NSFH.

Grandchildren's enrollment in school had divergent effects on grandchildren's relationships with maternal and paternal grandparents. Enrollment in school was negatively related to contact and closeness to maternal grandparents, though in case of maternal grandfathers it was true only for grandsons. On the other hand, enrollment in school had a positive effect on contact with paternal grandparents for young adults of both genders and on closeness to paternal grandmothers only for granddaughters. The results of the present study are inconsistent with Crosnoe and Elder's (2002) research which found only positive associations between enrollment in higher education and the grandparent-grandchild bond. It should be noted that Crosnoe and Elder (2002) did not

differentiate between maternal and paternal grandparents as well as between grandmothers and grandfathers.

One possible explanation for the lineage differences related to the effects of enrollment in school on grandchildren's ties to their grandparents may be a general matrilineal bias in the grandparent-grandchild relationship. The extant literature demonstrates that adult grandchildren have better relationships with maternal grandparents than with paternal grandparents (e.g., Creasey & Koblewski, 1991; Dubas, 2001; Hodgson, 1992). Relevant theories suggest that enrollment in school may have positive as well as negative effects on the grandparent-grandchild relationship. Rosow's role framework implies that when grandchildren enroll in school, the grandchild role becomes less salient to them due to competing responsibilities. At the same time, grandchildren's enrollment in school can be viewed as a positive life course event by their grandparents, and according to the stress family model, can strengthen grandchildren's ties to their grandparents. In any case, grandchildren who are enrolled in school may have less time, energy, and opportunities for maintaining strong relationships with their grandparents, regardless of lineage. It is possible, however, that grandchildren may evaluate changes in their relationships with grandparents differently for maternal and paternal ones. Due to the matrilineal advantage in the grandparent-grandchild relationship, grandchildren's reports may reflect their greater "guilt" about adverse effects of school enrollment on their relationships with maternal than paternal grandparents. At the same time, grandchildren can perceive that positive evaluations of their school enrollment by their grandparents provide a certain boost for their relationships with paternal grandparents.

In general, more research on the association between grandchildren's enrollment in school and the grandparent-grandchild bond is needed. For example, it is possible that geographic proximity can help explain differences related to lineage and the grandchild's gender in the association between grandchildren's student role and the grandparent-grandchild relationship. As mentioned above, the present study did not control for geographic proximity between young adults and their grandparents because this information is not available in the NSFH.

Consistent with Rosow's role framework, full-time employment was related to less frequent contact between young adults and their maternal grandparents. Parenthood, however, had positive implications for grandchildren's contact with their paternal grandparents. Young adults who had children reported more frequent contact with their paternal grandparents. These results are consistent with the intergenerational similarity hypothesis and the family stress model. Similar to school enrollment and full-time job, parenthood limits time and energy that grandchildren can devote to their grandparents. However, compared to school enrollment or full-time employment, parenthood is more likely to create extra opportunities for grandchildren's interactions with their grandparents, in particular with paternal grandparents. Again, the extant research and the present study show that there is a general matrilineal bias in grandparent-grandchild relationships. In other words, grandchildren have more frequent contact with, and feel closer to, their maternal grandparents than to their paternal ones. Yet, the findings of the present study seem to suggest that parenthood may be an important factor in strengthening grandchildren's relationships specifically with paternal grandparents. Parenthood may encourage grandchildren to improve their interactions with paternal

grandparents because young adults may want their children to get to know their grandparents on both sides (i.e., not only maternal but also paternal). After the birth of their great-grandchildren, paternal grandparents themselves may be more inclined to enhance their relationships with grandchildren in order to participate in the lives of their great-grandchildren.

In sum, the present study demonstrates that grandchildren's adult roles can be related to a weaker as well as stronger grandparent-grandchild bond. More specifically, the findings for grandchildren's residential independence and full-time employment provide support for Rosow's role framework. Separate residence and full-time job were related to less frequent contact with grandparents, although in case of full-time job, it was true only for maternal grandparents. Yet, the findings for parenthood are in accord with the intergenerational similarity hypothesis and the family stress theory. Compared to their childless counterparts, young adults who were parents had more frequent contact with their paternal grandparents. Further, this study indicates that enrollment in school can be negatively associated with grandchildren's ties to maternal grandparents, but positively related to grandchildren's relationships with paternal grandparents. At the same time, marriage was not predictive of the grandparent-grandchild bond.

In general, the results of the present study suggest that there can be lineage differences in the associations between grandchildren's adult roles and grandparent-grandchild ties. This study indicates that grandchildren's adult roles can negatively affect relationships with maternal grandparents. On the other hand, except for residential independence, grandchildren's adult roles can have positive implications for ties to paternal grandparents. As discussed above, these lineage patterns may reflect

grandchildren's greater guilt about adverse consequences of time demands and energy constraints related to their adult roles for their relationships with maternal than paternal grandparents. In turn, grandchildren's greater guilt may be explained by the general matrilineal bias in grandparent-grandchild ties. Overall, the present study seems to suggest that research in this area that does not differentiate between maternal and paternal grandparents does not provide a complete picture of adult grandchildren's interactions with their grandparents. Furthermore, theoretical debates about whether grandchildren's adult roles weaken or strengthen the grandparent-grandchild bond can benefit from taking into account lineage.

Grandchild's Gender

The second goal of this study was to examine whether young adults' gender moderates the association between grandchildren's adult roles and the grandparent-grandchild bond. This idea received very limited support. The argument that family roles have a stronger effect on granddaughters' relationships with their grandparents was not supported. Consistent with the contention that the association between "non-family" roles and the grandparent-grandchild bond is stronger for grandsons, enrollment in school was negatively related to closeness to maternal grandfathers only for grandsons. On the other hand, school enrollment was positively associated with closeness to maternal grandfathers and to paternal grandmothers only for granddaughters. These findings indicate the possibility that grandchildren's enrollment in school may have different implications for grandparents' relationships with their grandsons and granddaughters and suggest that more attention should be paid to lineage and gender in research on the grandparent-adult grandchild relationships.

Limitations and Conclusion

The present study had some limitations. As discussed above, the present study did not take into account grandparents' characteristics and geographic proximity between young adults and their grandparents. Additionally, measures of contact and closeness between young adults and their grandparents reflected only the perspective of grandchildren. Because of data limitations, the perspective of grandparents was not examined. The concept of intergenerational stake suggests that grandparents may report higher relationship quality than grandchildren (Bengtson & Kuypers, 1971) and therefore, grandparents' perceptions may be less sensitive to the effect of grandchildren's adult roles. Finally, low R^2 's suggest that other factors may matter for the associations between grandchildren's adult roles and the grandparent-grandchild bond. Future studies would benefit from considering life course transitions in grandparents' lives and other intergenerational relationships in the family. In order to maximize the sample size, the present study was not able to take into transitions in grandparents' lives and parents' intergenerational relationships because information on these measures is available in the NSFH only for those young adults whose biological parents were married to each other at the time of interviews.

Despite its limitations, the present research has certain strengths. In an area of limited study, the analyses presented here lend further support for the argument that grandchildren's adult roles may matter for the grandparent-grandchild bond (Mills, 1999; Crosnoe & Elder, 2002). The current study, however, has taken important steps in understanding young adults' relationships with their grandparents by considering young adults' relationships with all living grandparents, by examining a different group of

grandchildren than in previous studies in this area, and by investigating whether the association between grandchildren's adult roles and the grandparent-grandchild bond varies for grandsons and granddaughters. Unlike previous studies in this area, the present study also differentiates between maternal and paternal grandparents and the findings suggest that it is important to pay more attention to lineage in order to better understand the variations in the grandparent-adult grandchild bond.

Overall, although it remains unknown whether the connections between grandchildren's adult roles and their relationships with grandparents are temporary or long-term, this research helps identify how grandchildren's assumption of adult roles can influence the grandparent-grandchild relationship. Additionally, the findings shed light on times in the life course when particular attention should be paid to strengthening the grandparent-grandchild relationship and when additional support, if needed, should be provided to certain grandparents. These findings can help family professionals and policy-makers decide what needs to be done to meet the needs of the elderly, their families, and society in general. More specifically, this study suggests that when grandchildren assume certain adult roles, they may be less available to their grandparents if the latter need help. For example, grandchildren's separate residence and full-time employment were found to have adverse implications for contact with maternal and paternal grandparents. Further, grandchildren's enrollment in higher education was negatively related to their contact with, and closeness to, maternal grandparents.

The declines in opportunities for grandparent-grandchild interactions related to grandchildren's adult roles may imply fewer exchanges of different types of assistance between these generations. However, due to increases in longevity and reductions in

fertility, intergenerational support for older generations in the family is becoming even more important today than in the past (Hareven, 1996). The state will be relying more on the family to provide assistance and care for older family members because the worldwide population aging is likely to entail shortages of national resources allocated to health care and other types of services for the elderly (Gauthier, 2002; Putney & Bengtson, 2003). Additional resources (e.g., affordable caregiving services) should be made available to families of the elderly when due to circumstances in their lives, potential family caretakers, including grandchildren, are less able to provide functional assistance to older generations in the family.

The grandparent-grandchild relationship, however, is an important source to the both generations not only of functional assistance but also of emotional meaning. Deteriorating relationships between grandparents and grandchildren may also affect their overall well-being, including physical and mental health. Family members, therefore, should be educated about possible adverse implications of grandchildren's adult roles on the grandparent-grandchild relationship. Negative associations between grandchildren's adult roles and the grandparent-grandchild relationship can be explained by the limited amount of time and energy that grandchildren can invest in this relationship. This pattern, however, does not necessarily mean that grandchildren do not want to maintain the same level of relationships with their grandparents as in the past. Therefore, when problems arise, grandparents should be encouraged by family practitioners and mental health professionals to initiate interactions with their adult grandchildren on their own even if grandchildren appear to be "too busy" for their grandparents.

Table 3.1. Zero-Order Correlations.

| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|--|---------|---------|---------|---------|---------|---------|---------|---------|
| 1. Separate residence | - | | | | | | | |
| 2. Enrollment in school | -.05* | - | | | | | | |
| 3. Full-time job | .07** | -.33*** | - | | | | | |
| 4. Married | .35*** | -.25*** | .13*** | - | | | | |
| 5. Parent | .24*** | -.25*** | .05* | .51*** | - | | | |
| 6. Granddaughter | .06** | .05† | -.21*** | .06** | .11*** | - | | |
| 7. Grandchild's age | .31*** | -.38*** | .26*** | .46*** | .42*** | -.06** | - | |
| 8. White | .16*** | .01 | .04† | .15*** | -.03 | -.01 | .08*** | - |
| 9. Number of siblings | .03 | -.08*** | -.02 | .02 | .12*** | .02 | .09*** | -.13*** |
| 10. Grandchild's education | .13*** | -.07** | .13*** | .10*** | -.13*** | .05* | .27*** | .11*** |
| 11. Grandchild's income | .16*** | -.21*** | .30*** | .20*** | .02 | -.19*** | .34*** | .08*** |
| 12. Parental education | .05* | .13*** | -.08** | -.06* | -.20*** | -.02 | -.03 | .19*** |
| 13. Married to each other | .01 | .10*** | .01 | -.02 | -.11*** | -.01 | -.07** | .13*** |
| 14. Missing parental marital status | -.01 | -.05* | -.03 | .06** | .10*** | .01 | .08** | -.13*** |
| 15. Both maternal grandparents alive | -.05* | .11*** | -.06* | -.10*** | -.13*** | .03 | -.28*** | .02 |
| 16. Both paternal grandparents alive | -.10*** | .11*** | -.07** | -.11*** | -.12*** | -.01 | -.28*** | .02 |
| 17. Contact with maternal grandparents | -.13*** | -.03 | -.09** | -.02 | .01 | .17*** | -.12*** | -.04 |
| 18. Contact with paternal grandparents | -.13*** | .11** | -.02 | -.11** | -.05 | .03 | -.18*** | .05 |
| 19. Closeness to maternal grandmother | -.05 | -.13*** | .02 | -.01 | .02 | .06† | -.01 | -.14*** |
| 20. Closeness to maternal grandfather | -.02 | -.09* | -.01 | -.05 | -.02 | -.03 | -.02 | -.10* |
| 21. Closeness to paternal grandmother | -.07* | .06† | -.01 | -.07* | -.02 | -.05 | -.05 | -.05 |
| 22. Closeness to paternal grandfather | -.04 | .13** | -.05 | -.09† | -.06 | -.20*** | -.15** | -.02 |

Table 3.1. Continued.

| Variables | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|--|---------|---------|---------|---------|---------|--------|--------|--------|
| 9. Number of siblings | - | | | | | | | |
| 10. Grandchild's education | -.11*** | - | | | | | | |
| 11. Grandchild's income | -.05* | .25*** | - | | | | | |
| 12. Parental education | -.13*** | .31*** | .06** | - | | | | |
| 13. Married to each other | -.25*** | .14*** | .02 | .17*** | - | | | |
| 14. Missing parental marital status | .12*** | -.05* | .02 | -.19*** | -.46*** | - | | |
| 15. Both maternal grandparents alive | -.02 | -.05* | -.05* | .01 | .03 | -.05* | - | |
| 16. Both paternal grandparents alive | -.05* | -.09*** | -.11*** | .04† | .05* | -.07** | .19*** | - |
| 17. Contact with maternal grandparents | -.05† | -.02 | -.08** | -.05 | -.04 | .02 | .16*** | .08** |
| 18. Contact with paternal grandparents | -.10** | -.04 | -.04 | -.05 | .08** | .02 | .06† | .15*** |
| 19. Closeness to maternal grandmother | .01 | -.04 | -.03 | -.05† | -.14*** | .09** | .13*** | -.01 |
| 20. Closeness to maternal grandfather | .01 | .01 | .02 | -.04 | -.05 | .12** | .138 | -.09* |
| 21. Closeness to paternal grandmother | -.02 | .03 | -.01 | -.05 | .05 | -.01 | .07* | .02 |
| 22. Closeness to paternal grandfather | .01 | -.08† | -.08† | .05 | .08† | -.04 | .05 | .12* |

Table 3.1. Continued.

| Variables | 17 | 18 | 19 | 20 | 21 | 22 |
|--|--------|--------|--------|-----|--------|----|
| 17. Contact with maternal grandparents | - | | | | | |
| 18. Contact with paternal grandparents | .11** | - | | | | |
| 19. Closeness to maternal grandmother | .59*** | -.03 | - | | | |
| 20. Closeness to maternal grandfather | .44*** | -.10* | .60*** | - | | |
| 21. Closeness to paternal grandmother | -.04 | .58*** | .06 | .05 | - | |
| 22. Closeness to paternal grandfather | -.10* | .58*** | .01 | .04 | .76*** | - |

† < .10. * p < .05. ** p < .01. *** p < .001.

Table 3.2. Descriptive Statistics.

| Variables | <i>M</i> | <i>SD</i> | <i>Range</i> | <i>Unweighted N</i> |
|--|-----------|-----------|--|-------------------------|
| <u>Dependent Variables</u> | | | | |
| 1. Contact with maternal grandparents | 3.55 | 1.31 | 1 (not at all) – 6 (more than once a week) | 1,218 |
| 2. Contact with paternal grandparents | 3.14 | 1.27 | 1 (not at all) – 6 (more than once a week) | 1,050 |
| 3. Closeness to maternal grandmother | 6.66 | 2.66 | 0 (not at all) – 10 (extremely close) | 1,055 |
| 4. Closeness to maternal grandfather | 6.23 | 2.80 | 0 (not at all) – 10 (extremely close) | 655 |
| 5. Closeness to paternal grandmother | 5.80 | 2.86 | 0 (not at all) – 10 (extremely close) | 908 |
| 6. Closeness to paternal grandfather | 5.44 | 3.00 | 0 (not at all) – 10 (extremely close) | 522 |
| <u>Independent Variables</u> | | | | |
| 7. Separate residence | .76 | .43 | 0 (no) - 1 (yes) | 1,952 |
| 8. Enrollment in school | .24 | .43 | 0 (no) - 1 (yes) | 1,952 |
| 9. Full-time job | .65 | .48 | 0 (no) - 1 (yes) | 1,952 |
| 10. Married | .36 | .48 | 0 (no) - 1 (yes) | 1,952 |
| 11. Parent | .30 | .46 | 0 (no) – 1 (yes) | 1,952 |
| 12. Granddaughter | .54 | .50 | 0 (no) - 1 (yes) | 1,952 |
| <u>Control Variables</u> | | | | |
| 13. Grandchild's age | 25.93 | 4.55 | 18 – 34 | 1,952 |
| 14. White | .86 | .34 | 0 (no) – 1 (yes) | 1,952 |
| 15. Number of siblings | 2.21 | 1.26 | 0 (no siblings) – 4 (4 or more) | 1,952 |
| 16. Grandchild's Education | 13.77 | 1.73 | 6 (6 th grade) – 20 (doctorate) | 1,952 |
| 17. Grandchild's income | 24,610.57 | 29,963.13 | 0 – 500,000.01 | 1,952 |
| 18. Parental education | 13.52 | 2.57 | 3 (3 rd grade) – 20 (doctorate) | 1,952 |
| 19. Parents married to each other | .50 | .50 | 0 (no) - 1 (yes) | 1,952 |
| 20. Parents not married to each other (reference category) | .33 | .47 | 0 (no) - 1 (yes) | 1,952 |
| 21. Missing parental marital status | .17 | .38 | 0 (no) - 1 (yes) | 1,952 |
| 22. Both maternal grandparents alive | .24 | .43 | 0 (no) - 1 (yes) | 1,952 |
| 23. Both paternal grandparents alive | .19 | .39 | 0 (no) - 1 (yes) | 1,952 |

Note: Weighted means and standard deviations are shown.

Table 3.2(A). Descriptive Statistics Separately for Grandsons and Granddaughters and T-Test.

| Variables | Grandsons <i>N</i> = 905 ¹ | | Granddaughters <i>N</i> = 1047 ¹ | | <i>t</i> -test |
|---------------------------------------|--|-----------|--|-----------|-------------------------------|
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> <i>difference</i> |
| <u>Dependent Variables</u> | | | | | |
| 1. Contact with maternal grandparents | 3.32 | 1.24 | 3.75 | 1.33 | -.43*** |
| 2. Contact with paternal grandparents | 3.10 | 1.22 | 3.17 | 1.31 | -.07 |
| 3. Closeness to maternal grandmother | 6.50 | 2.61 | 6.81 | 2.70 | -.31† |
| 4. Closeness to maternal grandfather | 6.31 | 2.96 | 6.17 | 2.68 | .15 |
| 5. Closeness to paternal grandmother | 5.97 | 2.67 | 5.66 | 3.00 | .31 |
| 6. Closeness to paternal grandfather | 6.12 | 2.85 | 4.90 | 3.01 | 1.22*** |
| <u>Independent Variables</u> | | | | | |
| 7. Separate residence | .73 | .44 | .79 | .41 | -.05** |
| 8. Enrollment in school | .22 | .41 | .25 | .44 | -.04* |
| 9. Full-time job | .76 | .43 | .56 | .50 | .20*** |
| 10. Married | .33 | .47 | .39 | .49 | -.06** |
| 11. Parent | .31 | .46 | .41 | .49 | -.10*** |
| 12. Granddaughter | - | - | - | - | - |
| <u>Control Variables</u> | | | | | |
| 13. Grandchild's age | 26.24 | 4.59 | 25.67 | 4.49 | .57** |
| 14. White | .87 | .34 | .86 | .35 | .01 |
| 15. Number of siblings | 2.10 | 1.28 | 2.14 | 1.24 | -.05 |
| 16. Grandchild's Education | 13.68 | 1.75 | 13.85 | 1.71 | -.17* |
| 17. Grandchild's income | 30,712.37 | 38,749.07 | 19,317.13 | 17,738.18 | 11,395.24*** |

Table 3.2(A). Continued.

| Variables | Grandsons <i>N</i> = 905 ¹ | | Granddaughters <i>N</i> = 1047 ¹ | | <i>t</i> -test |
|--|--|-----------|--|-----------|-------------------------------|
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> <i>difference</i> |
| <u>Control Variables</u> | | | | | |
| 18. Parental education | 13.57 | 2.60 | 13.48 | 2.55 | .09 |
| 19. Parents married to each other | .51 | .50 | .50 | .50 | .01 |
| 20. Parents not married to each other (reference category) | .33 | .47 | .33 | .47 | .01 |
| 21. Missing parental marital status | .17 | .37 | .18 | .38 | -.01 |
| 22. Both maternal grandparents alive | .23 | .42 | .25 | .43 | -.02 |
| 23. Both paternal grandparents alive | .19 | .39 | .18 | .39 | .01 |

¹The sample size varied across measures of the grandparent-grandchild bond reflecting the number of respondents with each type of grandparent still living.

Note: Weighted means and standard deviations are shown. Unweighted *N*s are shown.

† ≤ .10. **p* ≤ .05. ***p* ≤ .01. ****p* ≤ .001.

Table 3.3. Ordinary Least Squares Regression Results for Contact with Grandparents.

| Variables | Maternal grandparents | | | Paternal grandparents | | |
|----------------------------------|-----------------------|-------------|---------|-----------------------|-------------|---------|
| | <i>B</i> | <i>SE B</i> | β | <i>B</i> | <i>SE B</i> | β |
| Separate residence | -.36 | .09 | -.12*** | -.29 | .10 | -.10** |
| Enrollment in school | -.27 | .10 | -.09** | .24 | .10 | .08* |
| Full-time job | -.15 | .09 | -.06† | .12 | .09 | .05 |
| Married | .05 | .10 | .02 | -.14 | .11 | -.05 |
| Parent | .16 | .11 | .06 | .32 | .11 | .12** |
| Granddaughter | .38 | .08 | .14*** | .06 | .08 | .02 |
| Grandchild's age | -.02 | .01 | -.07† | -.05 | .01 | -.18*** |
| White | -.09 | .11 | -.02 | .28 | .12 | .08* |
| Number of siblings | -.08 | .03 | -.08** | -.07 | .03 | -.07* |
| Grandchild's education | .02 | .03 | .02 | .05 | .03 | .06 |
| Grandchild's income | -.01 | .01 | -.01 | .01 | .01 | .03 |
| Parental education | -.01 | .02 | -.02 | -.05 | .02 | -.09** |
| Parents married to each other | -.12 | .09 | -.04 | .20 | .09 | .08* |
| Missing parental marital status | -.03 | .12 | -.01 | .22 | .13 | .06 |
| Both maternal grandparents alive | .41 | .08 | .15*** | | | |
| Both paternal grandparents alive | | | | .28 | .08 | .10** |
| R^2 | .09*** | | | .09*** | | |
| <i>Unweighted N</i> | 1,218 | | | 1,050 | | |

Note: *B* – unstandardized beta, β – standardized beta.

† < .10. **p* < .05. ***p* < .01. ****p* < .001

Table 3.4. Ordinary Least Squares Regression Results for Closeness to Maternal Grandparents.

| Variables | Grandmothers | | | Grandfathers | | |
|--------------------------------------|--------------|-------------|---------|--------------|-------------|---------|
| | <i>B</i> | <i>SE B</i> | β | <i>B</i> | <i>SE B</i> | β |
| Separate residence | -.16 | .21 | -.03 | .07 | .27 | .01 |
| Enrollment in school | -.85 | .21 | -.14*** | -1.68 | .41 | -.28*** |
| Full-time job | .02 | .20 | .01 | -.25 | .26 | -.04 |
| Married | -.04 | .22 | -.01 | -.28 | .31 | -.05 |
| Parent | -.05 | .23 | -.01 | -.26 | .32 | -.04 |
| Granddaughter | .34 | .17 | .06† | -.46 | .28 | -.08 |
| Grandchild's age | .01 | .03 | .02 | -.02 | .04 | -.03 |
| White | -.92 | .25 | -.12*** | -.71 | .35 | -.08* |
| Number of siblings | -.11 | .07 | -.05 | -.08 | .09 | -.04 |
| Grandchild's education | -.06 | .06 | -.04 | .03 | .08 | .02 |
| Grandchild's income | -.01 | .01 | -.03 | .01 | .01 | .01 |
| Parental education | .02 | .04 | .02 | .02 | .05 | .01 |
| Parents married to each other | -.58 | .19 | -.11** | .06 | .26 | .01 |
| Missing parental marital status | .21 | .26 | .03 | 1.07 | .35 | .12** |
| Both maternal grandparents alive | .74 | .17 | .14*** | .98 | .25 | .15*** |
| Enrollment in school x granddaughter | | | | 1.30 | .50 | .18** |
| R^2 | .08*** | | | .07*** | | |
| <i>Unweighted N</i> | 1,055 | | | 655 | | |

Note: *B* – unstandardized beta, β – standardized beta.

† < .10. **p* < .05. ***p* < .01. ****p* < .001.

Table 3.5. Ordinary Least Squares Regression Results for Closeness to Paternal Grandparents.

| Variables | Grandmothers | | | Grandfathers | | |
|--------------------------------------|--------------|-------------|---------|--------------|-------------|---------|
| | <i>B</i> | <i>SE B</i> | β | <i>B</i> | <i>SE B</i> | β |
| Separate residence | -.39 | .24 | -.06 | -.10 | .31 | -.02 |
| Enrollment in school | -.03 | .36 | -.01 | .36 | .34 | .06 |
| Full-time job | -.03 | .22 | -.01 | .03 | .32 | .01 |
| Married | -.36 | .27 | -.06 | .11 | .39 | .02 |
| Parent | .44 | .28 | .07 | .43 | .30 | .06 |
| Granddaughter | -.64 | .24 | -.11** | -1.23 | .29 | -.20*** |
| Grandchild's age | -.03 | .03 | -.05 | -.08 | .05 | -.11† |
| White | -.31 | .30 | -.04 | -.23 | .42 | -.03 |
| Number of siblings | -.01 | .08 | -.01 | .05 | .12 | .02 |
| Grandchild's education | .19 | .07 | .10** | -.03 | .11 | -.01 |
| Grandchild's income | .01 | .01 | .02 | -.01 | .01 | -.05 |
| Parental education | -.10 | .05 | -.09* | .04 | .06 | .03 |
| Parents married to each other | .26 | .22 | .05 | .42 | .31 | .07 |
| Missing parental marital status | -.09 | .32 | -.01 | -.20 | .47 | -.02 |
| Both paternal grandparents alive | .06 | .20 | .01 | .54 | .31 | .08† |
| Enrollment in school x granddaughter | .85 | .44 | .11† | | | |
| <i>R</i> ² | .03* | | | .08*** | | |
| <i>Unweighted N</i> | 908 | | | 522 | | |

Note: *B* – unstandardized beta, β – standardized beta.

† < .10. **p* < .05. ***p* < .01. ****p* < .001.

Table 3.6. Summary Table of Ordinary Least Squares Regression Findings.

| | Contact with maternal grandparents | Contact with paternal grandparents | Closeness to maternal grandmothers | Closeness to maternal grandfathers | Closeness to paternal grandmothers | Closeness to paternal grandfathers |
|----------------------|------------------------------------|------------------------------------|------------------------------------|--|------------------------------------|------------------------------------|
| Separate residence | yes(-) | yes(-) | no | no | no | no |
| Enrollment in school | yes(-) | yes(+) | yes(-) | yes(-) for grandsons and (+) for granddaughters | yes (+) for granddaughters | no |
| Full-time job | yes(-) | no | no | no | no | no |
| Married | no | no | no | no | no | no |
| Parent | no | yes(+) | no | no | no | no |

Yes – there was a statistically significant association between an independent variable and a dependent variable.

No – there was no statistically significant association between an independent variable and a dependent variable.

(+) – positive association between an independent variable and a dependent variable.

(-) – negative association between an independent variable and a dependent variable.

Table 3.7. Summary of Theoretical Findings.

| | H1: Negative associations. Grandchildren's adult roles are associated with less frequent contact and less close relationships between young adults and their grandparents. | H2: Positive associations. Grandchildren's adult roles are associated with more frequent contact and closer relationships between young adults and their grandparents. | H3: Granddaughters and Family Roles. The association between "family" roles (i.e., marriage and parenthood) and the grandparent-grandchild relationship is stronger for granddaughters than for grandsons | H4: Grandsons and Non-Family Roles. The association between "non-family" roles (i.e., separate residence, enrollment in school, and full-time employment) and the grandparent-grandchild relationship is stronger for grandsons than for granddaughters |
|-----------------------------|---|---|---|---|
| Adult Roles | | | | |
| Separate residence | <u>Supported:</u> for <ul style="list-style-type: none"> • contact with maternal grandparents • contact with paternal grandparents | <u>Not supported</u> | | <u>Not supported</u> |
| Enrollment in school | <u>Supported:</u> for <ul style="list-style-type: none"> • contact with maternal grandparents • closeness to maternal grandmothers • closeness to maternal grandfathers only for grandsons | <u>Supported:</u> for <ul style="list-style-type: none"> • contact with paternal grandparents • closeness to maternal grandfathers only for granddaughters • closeness to paternal grandmothers for granddaughters | | <u>Supported:</u> for <ul style="list-style-type: none"> • for closeness to maternal grandfathers |

□ - not applicable.

Table 3.7. Continued.

| | H1: Negative associations. Grandchildren's adult roles are associated with less frequent contact and less close relationships between young adults and their grandparents. | H2: Positive associations. Grandchildren's adult roles are associated with more frequent contact and closer relationships between young adults and their grandparents. | H3: Granddaughters and Family Roles. The association between "family" roles (i.e., marriage and parenthood) and the grandparent-grandchild relationship is stronger for granddaughters than for grandsons | H4: Grandsons and Non-Family Roles. The association between "non-family" roles (i.e., separate residence, enrollment in school, and full-time employment) and the grandparent-grandchild relationship is stronger for grandsons than for granddaughters |
|----------------------|--|--|---|---|
| Adult Roles | | | | |
| Full-time job | <u>Supported:</u> for <ul style="list-style-type: none"> contact with maternal grandparents | <u>Not supported</u> | | <u>Not Supported</u> |
| Married | <u>Not supported</u> | <u>Not supported</u> | <u>Not supported</u> | |
| Parent | <u>Not supported</u> | <u>Supported:</u> for <ul style="list-style-type: none"> contact with paternal grandparents | <u>Not supported</u> | |

☐ - not applicable.

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CHAPTER 4
CHANGES IN GRANDCHILDREN'S ADULT ROLES AND THE
GRANDPARENT-GRANDCHILD RELATIONSHIP

Introduction

The role of adult grandchild and the role of grandparent with adult grandchildren are demographically new social phenomena (Kemp, 2004). Due to recent increases in life expectancy, grandparents today live long enough to see their grandchildren reach adulthood and even middle age (Giarrusso, Silverstein, & Bengtson, 1996; Silverstein & Marengo, 2001). This means that grandparents can see their grandchildren go through different life course transitions (Roberto, 1990).

Relationships between grandchildren and their grandparents, however, are likely to be renegotiated when grandchildren transition to adulthood. It is generally acknowledged that young adults become economically independent and that their concerns shift from their family of origin to their family of procreation and career advancement. When grandchildren acquire adult roles, they may distance themselves emotionally and physically from their grandparents, due to time and energy constraints related to their new responsibilities. Alternatively, young adults may develop closer relationships with their grandparents because similar experiences related to adult roles can help adult grandchildren better understand their grandparents and because grandchildren's adult roles can be viewed as positive events in their lives by other family members.

Research on whether and how grandchildren's acquisitions of adult roles can affect the grandparent-grandchild bond over time is practically nonexistent. In fact, few

studies have used longitudinal data to examine this issue (e.g., Crosnoe & Elder, 2002; Mills, 1999). It is essential, however, to investigate the association between grandchildren's acquisitions of adult roles and the grandparent-grandchild bond for several reasons. In general, interpersonal relationships between family members are important to the lives of individuals (Thornton, Orbuch, & Axinn, 1995). These relationships may affect people's behaviors, attitudes, and values as well as provide important social capital and have implications for individuals' overall well-being, including both physical and mental health. Adult grandchildren and their grandparents are also potential resources in each other's lives (Bengtson, 2001). They can provide each other with various types of assistance, such as advice, caregiving, financial and emotional support (Ashton, 1996; Barranti, 1985; Hamon, 1995; Harwood & Lin, 2000; Langer, 1990). Additionally, intergenerational relationships provide family members with a sense of continuity and stability (Elder & Conger, 2000). However, grandchildren's transitions to adult roles may lead to changes in their relationships with grandparents. For example, when grandchildren acquire adult roles, they may be less available to their grandparents due to competing responsibilities and time constraints. Alternatively, grandchildren's adult roles may strengthen the grandparent-grandchild bond by providing additional opportunities for their interactions with each other.

The main goal of the present research is to examine whether and how changes in grandchildren's adult roles (i.e., role acquisitions/occupations as well as exits) are related to changes in their perceptions of contact with, and closeness to, their grandparents. Drawing on data from Waves 2 and 3 of the National Survey of Families and Households, this study examines changes in residential independence, school enrollment,

full-time employment, marital status, and parenthood status among young adults (ages 18-34). Building on the very few studies in this area, the current study broadens our base of knowledge in several ways. First, I examine young adults' relationships with all living grandparents, highlighting the important gender and lineage processes involved in intergenerational bonds. Second, I consider a different group of grandchildren than in previous studies in order to investigate whether findings of prior research are generalizable to other grandchildren. Finally, I assess whether the association between grandchildren's adult roles and the grandparent-grandchild bond varies for grandsons and granddaughters which has not been done in previous studies.

Background

Life Course Perspective

The life course perspective provides a general framework for investigating intergenerational relationships. This framework helps examine why transitions in one generation can have consequences for lives of other generations in the family. Two key concepts of the life course perspective – transitions and linked lives – are particularly relevant to understanding of the associations between changes in grandchildren's adult roles and changes in the grandparent-grandchild relationship over time.

Transitions

Life course transitions are defined as short-term changes in state or role and represent different role entries and exits (e.g., leaving home, getting a full-time job, marrying, and getting a divorce; Elder, Johnson, & Crosnoe, 2003). In spite of the bounded-in-time nature of transitions, their consequences may be long-term (Elder, 1985, 1991). For instance, individuals going through transitions can experience changes in

status or identity which can lead to new behavioral patterns (Elder, Johnson, & Crosnoe, 2003). In addition, Riley and Waring (1976) argue that practically all transitions are characterized by two types of difficulties. The first one is the “strain of learning” (Riley & Waring, 1976: 380). While taking on a new role, individuals have to make numerous adjustments. Young adults, for example, have to balance conflicting demands of multiple new roles in different spheres of life - work, family, and community. The dual nature of the transition process is the second issue related to transitions (Riley & Waring, 1976: 381). Not only do individuals have to get used to a new role, but they also have to give up an old one. Role exits, in turn, require additional learning and adjustments. Thus, commitment to the role of husband or wife implies abandoning of the unmarried state (Riley & Waring, 1976). In turn, possible behavioral changes related to transitions to adult roles and stress associated with acquiring new roles and abandoning old ones can have implications for grandchildren’s relationships with their grandparents.

Linked Lives

The concept of “linked lives” helps us understand how intergenerational relationships in the family can be impacted by life course transitions in different generations. This concept implies that the consequences of life course events can extend beyond a particular individual by affecting others in the family (Elder, 1985; Elder, Johnson, & Crosnoe, 2003; Hagestad, 1981). Individual transitions of family members are embedded in kinship relationships because life courses of family members are interrelated and interdependent within and between generations (Elder, 1985, 1991, 1994). Interconnectedness between grandparents and grandchildren, for instance, is

created through roles, interactions, sentiments, and exchanges of support (Giarrusso, Silverstein, & Bengtson, 1996).

The life course perspective serves as a good starting point for thinking about the implications of changes in grandchildren's adult roles for the grandparent-grandchild bond. Nevertheless, more specific theories are needed to stipulate in what direction (if any) grandchildren's relationships with their grandparents develop when grandchildren transition to adult roles. The following theoretical perspectives are relevant for this study: the role framework and the intergenerational similarity hypothesis in combination with the family stress model.

The Role Framework

The role framework was suggested by Rosow (1985) for the examination of how changes in different roles are interrelated and interdependent over the life course. Rosow (1985) identified four role types: the institutional, the tenuous, the informal, and the non-role². The tenuous role is particularly useful to the study of the association between grandchildren's adult roles and the grandparent-grandchild relationship. Roles of a grandparent and grandchild can be considered tenuous roles because there are no definite behavioral norms, expectations and guidelines attached to these roles (Bengtson, 1985;

² Institutional roles are the major institutionalized statuses with roles (e.g., men, women, professional, manual workers, parents, children, Catholics, Baptists, public officials, organizational members, race, ethnicity). The normative expectations for institutional roles are clearly defined (Rosow, 1985, p. 68). According to Rosow (1985), tenuous roles consist of "definite social positions without roles or with only vague, insubstantial ones" (e.g., Nobel laureates, the elderly, divorcees, the chronically unemployed; p. 68). There are only few normative guidelines attached to tenuous roles. Unlike tenuous roles, informal roles represent role behavior that is not connected with any specific status or position. These roles, however, have social functions that are associated with a particular person or subgroup. The examples of the informal roles are tough guys, blackmailers, prima donnas, and confidants (Rosow, 1985, p. 73). The non-role is a mixture of idiosyncratic behavior, personality factors, personal style, and so on, that does not have any significant patterned social consequences (Rosow, 1985, pp. 74-75).

Hagestad, 1985; Wood, 1982). Moreover, the rights and obligations of grandparents and grandchildren with respect to one another are unclear.

According to the role framework, more tenuous or ambiguously defined roles such as grandchild become less important to individuals when they acquire roles that are better regulated by social norms (e.g., adult roles of worker, spouse, or parent; Rosow, 1985). The acquisition of adult roles can potentially make grandchildren more distant from their grandparents, because of a greater number of explicit expectations and responsibilities related to these roles. On the other hand, grandchildren who exit from adult roles (e.g., become unemployed, get a divorce, or leave school) or who “fail” to acquire an adult role (e.g., live with parents, not employed, single, or childless) may have better relationships with their grandparents because these grandchildren have fewer time constraints and more time and energy to devote to their interactions with grandparents.

In general, competing responsibilities, time demands, role strain, and role overload associated with adult roles can have adverse implications for tenuous roles, such as grandchild, that young adults have been occupying and as a result, for interpersonal relationships between family members. Accordingly, the grandchild role may become less salient to individuals when they acquire adult roles. Cherlin and Furstenberg (1986), for instance, argue that grandparents’ relationships with their adult grandchildren are mainly symbolic (p. 95). According to grandparents’ reports in their research, adult grandchildren were too busy to maintain relationships with grandparents.

In his research on the grandparent-adult grandchild relationship, Mills (1999) specifically tested Rosow’s role framework and found mixed support for this theoretical perspective. Drawing on pooled data from five waves of the Longitudinal Study of

Generations (1971-1994), Mills examined whether changes in grandchildren's adult roles (i.e., role acquisitions and role exits) were consequential for different dimensions of intergenerational solidarity with grandparents. The study grandchildren were babyboomers, born between 1941 and 1954. Their age ranged from 19 to 55 years old across the waves. Role acquisitions included getting a job, getting married, becoming a parent, and remarriage after divorce. Job lay-offs and divorces were classified as role exits. Dimensions of intergenerational solidarity between grandchildren and grandparents included association (i.e., contact), affectual solidarity (i.e., closeness), and consensus (i.e., similarity in ideals, values, and opinions).

Mills (1999) found that role acquisitions did not necessarily lead to declines in intergenerational solidarity, nor did role losses always result in increases in intergenerational solidarity. For example, consistent with Rosow's role framework, getting or having a job was predictive of decreases in adult grandchildren's association with grandparents, whereas a grandchild's divorce was related to increased association with grandparents. On the other hand, contrary to Rosow's role framework, a grandchild's first marriage predicted increased association with grandparents, while a grandchild's loss of a job was related to a decline in association with grandparents (Mills, 1999). Furthermore, the direction of the effect of a particular role transition was different for different dimensions of intergenerational solidarity. In addition, whether a specific role transition was associated with lesser or greater solidarity between grandchildren and grandparents was contingent on the gender of the grandparent. For instance, becoming a parent decreased association and consensus with grandmothers and decreased affectual

solidarity with grandfathers. However, parenthood increased association and consensus with grandfathers and increased affectual solidarity with grandmothers (Mills, 1999).

The Intergenerational Similarity Hypothesis and the Family Stress Model

The intergenerational similarity hypothesis was proposed by Bengtson and Black (1973) in order to examine the consequences of offspring's adult roles for the parent-child relationship. According to this hypothesis, offspring's acquisitions of and experiences related to such adult roles as worker, spouse, and/or parent increase similarity to the parent generation which strengthens the parent-child bond. When children reach adulthood, the parent-child relationship becomes a relationship between two generations of adults. Because of similar experiences related to adult roles, offspring can identify more with their parents and can get a better understanding and appreciation of their parents.

Studies on the implications of offspring's adult roles for the parent-adult child relationship provide some support for the intergenerational similarity hypothesis. In Aquilino's (1997) research, parents perceived that offspring's transitions to higher education, marriage, cohabitation, and full-time employment were associated with positive changes in the parent-child relationship. On the other hand, parents of divorced and separated children rated the parent-child relationship nearly the same as did parents of never-married children. Also, contrary to the intergenerational similarity hypothesis, Aquilino (1997) found that the transition to parenthood adversely affected intergenerational solidarity between parents and adult children (Aquilino, 1997).

Consistent with Aquilino's (1997) research, several other studies that considered the association between offspring's adult roles and the parent-child relationship have

found that when offspring became parents or had coresidential children under the age of 18, their relationships with parents deteriorated (Baruch & Barnett, 1983; Kaufman & Uhlenberg, 1998; Lawton, Silverstein & Bengtson, 1994; Rossi and Rossi, 1990; Umberson, 1992). At the same time, some prior research indicates that offspring's parenthood can also improve relationships between adult children and their parents (Fischer, 1981; Umberson, 1992). The reasons for contradictory findings of these studies are unclear. It seems unlikely that one specific factor can account for these differences. The extant research has considered different age groups of offspring, various dimensions of intergenerational solidarity between parents and their adult children, the perspectives of the both generations, and different parent-child gender dyads. Studies in this area have also examined offspring who were new parents as well as those who had older children.

The intergenerational similarity hypothesis can be applied not only to the parent-child relationship but also to the grandparent-grandchild relationship. Acquisitions of adult roles can create extra linkages between the grandparent and grandchild generations as well. It is possible that grandparents as well as parents can serve, to some degree, as role models for grandchildren when they reach adulthood. It can be argued, however, that intergenerational relationships in the family are contingent not only on similarity/dissimilarity in adult roles between younger and older generations but also on evaluation (i.e., positive vs. negative) of these roles by family members. For instance, negative views on divorce, separation, unmarried status, or lack of a job can help explain adverse implications of these events on relationships between younger and older generations in the family. In this respect, Reuben Hill's (1958) model of families under stress and the extension of this model by McCubbin and Patterson (1983) can add to the

investigation of the associations between changes in grandchildren's adult roles and the grandparent-grandchild relationship in terms of the intergenerational similarity hypothesis.

According to the family stress model, different events in people's lives can alter relationships between family members by creating stress (Hill, 1958; McCubbin & Patterson, 1983). The direction of the change in these relationships, however, depends on how stressors are perceived by family members. This model suggests that in spite of the fact that grandchildren's acquisitions of adult roles cause stress, they can be viewed as positive events in young adults' lives and therefore, they can improve interpersonal relationships in the family. On the other hand, specific exits from adult roles (e.g., divorce and job lay-off) or failures to acquire adult roles (e.g., residential dependence and bachelorhood) can be considered as negative stressors in young adults' lives and can adversely affect relationships between family members. For example, similar to Aquilino's (1997) research mentioned above, other studies on the parent-child relationship indicated that offspring's failure to transition to or offspring's abandoning of a socially approved adult role such as spouse led to poorer relationship quality between adult children and their parents (Baruch & Barnett, 1983; Kaufman & Uhlenberg, 1998; Lawton, Silverstein, & Bengtson, 1994; Umberson, 1992).

Similarity/dissimilarity in roles between generations and positive/negative evaluations of these roles by family members may not always line up, however. For example, the grandchild generation can experience adult roles that were not experienced by older generations (e.g., enrollment in higher education or full-time employment). These roles, however, can be viewed positively by other generations in the family and

therefore, can strengthen intergenerational relationships between family members. On the other hand, it is also possible that both members of an intergenerational dyad have gone through a divorce or job lay-off. Nevertheless, these events can be perceived negatively by family members and can lead to the deterioration of intergenerational relationships. For example, parents' personal sense of accomplishment is often affected by their children's achievements (Hagestad, 1986a). Therefore, children's failures such as divorce or unemployment can adversely affect the parent-child relationship. This may also apply to grandparents' relationships with grandchildren. Divorce and unemployment in the grandchild generation may add extra tension to intergenerational relationships between family members. Older generations may become disappointed with younger generations who are unsuccessful in different spheres of life.

As discussed above, Mills's (1999) study found some support for the argument that grandchildren's acquisitions of adult roles can strengthen the grandparent-grandchild bond and that grandchildren's exits from adult roles can adversely affect the grandparent-grandchild relationship. The findings of Crosnoe and Elder (2002) also supported this idea. They used as the starting point of their research the 1994 survey of the Iowa Youth and Families Project when the study grandchildren were seniors in high school and, as the end point for grandchildren's reports, the 1997 survey. More specifically, Crosnoe and Elder (2002) examined the perspective of both the grandchild and the grandparent generations on the association between grandchild's enrollment in higher education and the quality of the grandparent-grandchild relationship. This particular transition was not considered in Mills's study (1999). Crosnoe and Elder (2002) also controlled for other grandchildren's transitions (i.e., getting married, becoming a parent, and getting a job).

The results of their research revealed that both grandchildren and grandparents reported better relationship quality when the grandchild was enrolled in higher education.

Nevertheless, grandchildren's acquisitions of the other adult roles were not predictive of the grandparent-grandchild bond. Crosnoe and Elder (2002) recognized, however, that their findings might not be generalizable to the entire U.S. population. The results of their study might be specific to tightly-knit families in rural Iowa where higher education has become crucial for adult success. Additionally, it should be noted that their sample was limited to college-age grandchildren. Lack of significant findings for grandchildren's other transitions can be partially attributed to this restricted age group. Not so many young adults get married, become parents, and get a more or less permanent full-time job within two-to-three years after finishing high school.

In sum, Rosow's role framework and the intergenerational similarity hypothesis paired with the family stress theory can be viewed as two competing theoretical approaches to understanding the associations between changes in grandchildren's adult roles and changes in the grandparent-grandchild bond. The former maintains that grandchildren will distance themselves from their grandparents when they acquire adult roles and that the grandparent-grandchild relationship will improve when grandchildren exit adult roles. In contrast, the latter perspectives state that grandchildren's acquisitions of adult roles will strengthen grandparent-grandchild ties, while grandchildren's certain exits from adult roles will weaken the grandparent-grandchild bond. Consequently, I test two main conflicting hypotheses. Rosow's role framework motivates Hypotheses 1a and 1b:

Hypothesis 1a: Grandchildren's acquisitions/occupations of adult roles are associated with deteriorations in the grandparent-grandchild relationship.

Specifically, residential independence, school enrollment, full-time employment, marriage, and parenthood will be linked to weaker grandparent-grandchild ties.

Hypothesis 1b: Grandchildren's role exits or failures to acquire adult roles are related to improvements in the grandparent-grandchild relationship.

Specifically, coresidence with parents, not being enrolled in school at both waves, becoming non-student between waves, not being employed full-time, not being married, not being a parent will be linked to stronger grandparent-grandchild ties.

The intergenerational similarity perspective and the family stress model suggest

Hypotheses 2a and 2b:

Hypothesis 2a: Grandchildren's acquisitions/occupations of adult roles are associated with improvements in the grandparent-grandchild relationship.

Specifically, residential independence, school enrollment, becoming non-student between waves, full-time employment, marriage, and parenthood will be linked to stronger grandparent-grandchild ties.

Hypothesis 2b: Specific role exits or failures to acquire adult roles are related to deteriorations in the grandparent-grandchild relationship.

Specifically, coresidence with parents, not being enrolled in school at both waves, not being employed full-time, not being married, not being a parent will be linked to weaker grandparent-grandchild ties.

Note that both theoretical approaches suggest that when grandchildren leave school between waves, their relationships with grandparents improve. Rosow's role framework implies that leaving school between waves may be associated with a stronger grandparent-grandchild bond because grandchildren who become non-students

potentially have more time and energy to invest in their relationships with grandparents. At the same time, the family stress model suggests that leaving school, especially with a degree, may lead to improved grandparent-grandchild relationships because this event in grandchildren's lives can be perceived as a positive stressor.

Grandchild's Gender

The theoretical frameworks discussed above are helpful for examining whether and how grandchildren's adult roles are salient for the grandparent-grandchild relationship but they are not sensitive enough to gendered dynamics in relationships between family members. It is important, however, to investigate whether the associations between changes in grandchildren's adult roles and their relationships with grandparents are moderated by the grandchild's gender for several reasons. Although prior research examining this issue is nonexistent, several studies on the grandparent-adult grandchild relationship, more generally, indicate that the grandchild's gender shapes adult grandchildren's ties to their grandparents (e.g., Ashton, 1996; Creasey & Koblewski, 1991; Dubas, 2001; Kennedy, 1991, 1992; Silverstein & Long, 1998). More specifically, these studies demonstrate that compared to grandsons, granddaughters have stronger relationships with grandparents.

Stronger ties between granddaughters and their grandparents have been explained by the kin-keeping role of women. According to the kin-keeping perspective, women are more involved in family relationships than are men (DiLeonardo, 1987; Fingerman, 2004; Hagestad, 1986b; Rosenthal, 1985). This perspective suggests that because granddaughters are more invested in their relationships with grandparents,

grandchildren's adult roles are likely to be more consequential for granddaughters' than for grandsons' ties to grandparents.

At the same time, it should be also noted that adult roles are experienced differently by men and women (Hogan & Astone, 1986; Mahaffy, 2003). Specifically, gender has implications for the process, timing, and consequences of transitions into adult roles due to gender role socialization, cultural norms, and structural factors. For instance, in spite of the increase in women's participation in the labor force and changes in gender ideology, work roles are still socially considered to be more significant for men while family roles are for women. In addition, economic and family structures rely more heavily on women's unpaid labor in the home than on men's labor. Therefore, men and women can face different time demands and constraints related to adult roles.

Gauthier and Furstenberg (2002), for example, examined changes in the patterns of time use of young adults ages eighteen to thirty-four in nine industrialized countries including the U.S. Drawing on data from time budget surveys that were carried out from 1985 to 1992, they found that although both men and women spent less time on leisure, mainly social leisure, after transitions to partnership and parenthood, these life course events were also associated with a major increase in time devoted to housework (especially routine housework such as cooking, cleaning, and child care) for women and only a small increase for men. On the other hand, parenthood was related to decreases in time devoted to paid work for women but to increases in time spent on paid work by men in the U.S. (Gauthier & Furstenberg, 2002). It can be argued that because of gender differences in time demands associated with adult roles, the consequences of different adult roles on the grandparent-grandchild bond may vary for grandsons and

granddaughters. For example, employment may be associated with the disengagement of grandsons from their grandparents while partnership and parenthood may lead to less involvement between granddaughters and their grandparents. Accordingly, the present study tests two hypotheses regarding the moderating effect of the grandchild's gender on the associations between changes in grandchildren's adult roles and the grandparent-grandchild relationship:

Hypothesis 3: The association between changes in grandchildren's "family" roles (i.e., marriage and parenthood) and changes in the grandparent-grandchild relationship is stronger for granddaughters than for grandsons.

Hypothesis 4: The association between changes in grandchildren's "non-family" roles (i.e., separate residence, enrollment in school, and full-time employment) and changes in the grandparent-grandchild relationship is stronger for grandsons than for granddaughters.

Additional Factors Related to the Grandparent-Grandchild Relationship

In addition to grandchildren's adult roles, the grandparent-grandchild relationship may be contingent on several other factors. Grandchildren's age is relevant for the examination of the grandparent-grandchild bond. The age range of the study grandchildren is 18 -34 years. Older grandchildren in the sample may be very different from younger ones because of changes (e.g., changes in health, psychological changes, and general maturation) that the former have already experienced in their lives. Race can also matter for grandparent-grandchild interactions. Some studies have found stronger ties between grandparents and grandchildren in Black families than in non-Black families (e.g., Ashton, 1996; Lawton et al., 1994; Wiscott & Kopera-Frye, 2000). The number of siblings a grandchild has can be consequential for the grandparent-grandchild bond as well. Siblings, for instance, can facilitate relationships between a grandchild and a

grandparent by providing extra opportunities for interactions between them.

Alternatively, having more siblings can weaken the grandparent-grandchild bond because siblings may “compete” for grandparents’ attention and time. Young adults with higher levels of education as well as those whose parents have higher socioeconomic status may have more resources and opportunities to interact with their grandparents.

The present study also controls for whether young adults’ biological parents were married to each other. When biological parents of grandchildren are married to each other, they may have more opportunities to act as intermediaries between their offspring and the grandparent generation (i.e., their own parents and their parents-in-law). Parental divorce, on the other hand, is associated with the deterioration of grandchildren’s relationships with paternal grandparents over time (Cherlin & Furstenberg, 1986; Kruk & Hall, 1995). One of the reasons for this trend is father’s decreased involvement with his children after divorce. In addition, the extant literature demonstrates that the experience of parental divorce in childhood can have negative consequences in later life for adult offspring’s relationships with noncustodial parents, who are usually fathers, (Amato & Booth, 1996; Booth & Amato, 1994) as well as with custodial parents, who are usually mothers (Lye, Klepinger, Hyle, & Nelson, 1995). In turn, weak ties between adult offspring and parents may have negative effects on the grandparent-adult grandchild bond. It should be noted, however, that research by Cooney and Smith (1996) reveals that parental divorce does not have implications for adult grandchildren’s relationships with grandparents. Compared to younger grandchildren, adult grandchildren are often less dependent on the parent generation and can have more control over their relationships with grandparents. The present study did not consider parents’ relationships

with the grandparent and grandchild generations because these measures were not available for all young adults in the sample. Preliminary work, however, indicated that the results for grandchildren's adult roles were not affected by having measures of parents' intergenerational relationships, at least for the subgroups for which they were available.

Finally, the present study controls for whether the availability of both grandparents of a given lineage makes a difference in the grandparent-grandchild relationship. The present study did not include other grandparents' characteristics. Information on these characteristics was available only for certain grandparents, depending on marital status of young adults' parents.

Implications of the Present Research

Little prior research on the association between grandchildren's transitions to adult roles and the grandparent-grandchild relationship exists (e.g., Crosnoe & Elder, 2002; Mills, 1999). At the same time, the previous studies in this area have laid a good foundation for future studies. Specifically, similar to the extant literature, the present research draws on longitudinal data which helps investigate whether the implications of grandchildren's acquisitions of, and exits from, adult roles are different from grandchildren's occupation of these roles.

The few available studies in this area, however, have some limitations that the present study attempts to overcome. In particular, the present study examines adult grandchildren's relationships with all available grandparents and therefore, takes into account the grandparent's gender and lineage, whereas prior research in this area has not investigated grandchildren's ties to all living grandparents. The results of these studies

may not be generalized from the specific relationship to other relationships. Studies that assess grandchildren's relationships with all living grandparents can provide a more complete picture of variations in these relationships. The current study also focuses on a different group of grandchildren (ages 18 -34, born in the late 60s – early 80s) in order to see whether the results of prior research on baby-boomer grandchildren (ages 19 – 55, born in the early 1940s – mid-50s; Mills, 1999) and on college-age grandchildren from rural families in Iowa (born in the mid-1970s; Crosnoe & Elder, 2002) will hold for other groups of grandchildren. The previous studies also has not addressed whether the grandchild's gender moderates the association between changes in grandchildren's adult roles and the grandparent-grandchild relationship. In general, because the two available studies in this area have found inconsistent results, more research is needed in order to better understand whether and how relationships between grandchildren and grandparents are contingent on grandchildren's transitions to adult roles.

Method

Sample

This study draws on data from Waves 2 and 3 of the NSFH. Wave 1 of the NSFH was conducted in 1987-88 and included interviews with a probability sample of 13,017 respondents. The sample consisted of a main cross-section of 9,643 households and oversampling of minorities (i.e., African Americans, Puerto Ricans, Mexican Americans), one-parent families and families with stepchildren, cohabiting couples and recently married persons. The target population represented the non-institutional United States population age 19 and older (Sweet, Bumpass, & Call, 1988). At Wave 1 of the NSFH, respondents who had any biological, adopted, step (including partner's), or foster

children under the age of 18 living in the household were also asked a series of questions about one of these children – the “focal child.” This child was selected if his/her name came first after all the names of the children in the household were listed alphabetically. There were two groups of focal children depending on their age (i.e., age 5-11 or 12-18; $N = 3,808$). It should be noted that focal children themselves were not interviewed at Wave 1.

The sample for Wave 2 which was conducted in 1992-94, consisted of 10,008 adults from Wave 1 and included a telephone interview with the same children who were focal children at Wave 1 (Sweet & Bumpass, 1996). Of the original focal children at Wave 1, 2,505 children (66%) participated at Wave 2. These children fell within one of two age groups. Telephone interviews were conducted with focal children ages 18-23 ($N = 1,090$). Shorter telephone interviews were conducted with focal children ages 10-17 ($N = 1,415$).

The sample for Wave 3 of the NSFH conducted in 2001-2003 was 7,277 adults from Waves 1 and 2 (Sweet, Bumpass, & Call, 2002). Interviews were attempted with focal children who were age 18 and older at the time of Wave 3, regardless of whether or not they completed an interview during Wave 2 of the NSFH. These young adults were ages 18 - 34 at Wave 3. Specifically, interviews at Wave 3 were completed with 869 younger focal children from Wave 2, with 654 older focal children from Wave 2, and 429 additional focal children who had not completed interviews at Wave 2 ($N = 1,952$). Because information was not available on their past relationships with grandparents from Wave 2, the 429 additional focal children were not included in the analysis. The present study draws on data from telephone interviews only with those focal children who

participated at both Waves 2 and 3. That is, the final sample consists of 1,523 focal children who represent 40% of Wave 1 original focal children. Compared to those who dropped out before Wave 3, these retained focal children were more likely to be White, female, to have biological parents who were married to each other, and to report closer relationships with paternal grandfathers, but not other grandparents. This study refers to focal children as young adults or grandchildren.

Weights

Sampling weights are available for the NSFH data because of the complex survey design. Unstandardized coefficients were compared for weighted and unweighted data. The results were similar. This paper presents weighted estimates.

Measures

All measures were taken from Waves 2 and 3 of the NSFH, with the exception of race/ethnicity that came from Wave 1.

Dependent Variables

Changes in contact with grandparents. Two variables measuring changes in grandchildren's contact with maternal grandparents and paternal grandparents, each as a couple, were created by comparing young adults' responses to contact questions with their grandparents at Wave 2 and Wave 3. The wording of and the number of response categories for the contact questions varied for different groups of grandchildren necessitating some recoding before these change score variables were created. Older grandchildren at Wave 2 and all grandchildren at Wave 3 responded to the following question on contact with their grandparents of a given lineage: "During the last year, about how often did you see, talk on the telephone, or receive a letter or e-mail from your

grandmother/grandfather/grandparents on your mother's side/on your father's side?"

Younger grandchildren at Wave 2, however, were asked two questions about contact with their grandparents of a given lineage: 1) about communication with grandparents, "During the last year, about how often did you talk on the telephone or receive a letter from your grandmother/grandfather/grandparents on your mother's/father's side?", and 2) about visits with grandparents, "During the last year, how often did you see your grandmother/grandfather/grandparents on your mother's/father's side?" Responses to these two questions on communication/visits with grandparents at Wave 2 for younger grandchildren were averaged to create a single measure of contact with grandparents of a given lineage.

Response categories for contact questions ranged from 1 = *not at all* to 6 = *more than once a week* at Wave 2 for younger grandchildren and at Wave 3 for all grandchildren. However, response categories for contact questions ranged from 1 = *not at all* to 5 = *more than once a week* at Wave 2 for older grandchildren. The response categories for the contact questions for younger grandchildren at Wave 2 and for all grandchildren at Wave 3 were recoded in order to range from 1 = *not at all* to 5 = *more than once a week*. Specifically, categories 2 = *about once a year* and 3 = *several times a year* were collapsed into 2 = *less than once a month*.

I explored the potential impact of differences in the measurement of contact with grandparents between younger and older grandchildren in the sample. I ran exploratory models that included a dummy variable for older grandchildren. The results for the dummy variable were not significant. In addition, I ran separate models for younger and older grandchildren. The results were similar.

Changes in closeness to grandparents. Four variables measuring changes in closeness to each grandparent were created by comparing young adults' responses to the same question at Waves 2 and 3, "How would you describe your relationship with this grandparent?" Responses ranged from 0 = *not at all close* to 10 = *extremely close*. Because grandchildren reported on their relationships with none to four grandparents, depending on the number who were still alive, relationships with each grandparent were considered in turn.

Independent Variables

Several independent variables captured changes in residential independence, school enrollment, full-time employment, marital and parenthood status experienced by the grandchild between Waves 2 and 3. These variables were constructed by comparing young adults' responses to similar questions at the time of the two interviews. Because younger focal children at Wave 2 were not asked questions about their marital status, parenthood status, and employment, measures of changes in these adult roles for this group of grandchildren were based on relevant history questions at Wave 3. It should be noted that due to sample size, multiple transitions between Waves were not considered.

Changes in residential independence. This was measured by three dummy variables: separate residence at both waves, started living alone between waves, and lived with parents at both waves (reference category). '*Lived with parents at both waves*' group includes young adults who started living with parents between waves ($N = 25$) because the latter group was too small to be included as a separate group in the models.

Changes in school enrollment. This was measured by three dummy variables: enrolled in school between waves, not enrolled in school at both waves, and left school

between waves (reference category). ‘*Enrolled in school between waves*’ group includes young adults who were enrolled in school at both waves ($N = 44$) because the latter group was too small to be included as a separate group in the models. In the present study, enrollment in school implies enrollment in any kind of educational institution beyond high school (i.e., a vocational, technical, or trade school; a two-year, junior, or community college; four-year college or university; professional or graduate school; and a business college or secretarial/nursing school).

Changes in full-time employment. This was measured by four dummy variables: worked full-time at both waves, started working full-time between waves, worked less than full-time at both waves, not employed at both waves (reference category). Full-time is defined as 30 hours or more per week. ‘Worked less than full-time at least at one wave’ group consists of grandchildren who worked part-time or were out of the labor force at least at one of the two waves. Several different transitions in grandchildren’s employment status were combined in this group because of their small sizes (i.e., worked part-time at both waves ($N = 9$), transitioned from not employed to part-time employment between waves ($N = 130$), transitioned from part-time to not being employed between waves ($N = 16$), transitioned from full-time employment to part-time employment between waves ($N = 21$), and transitioned from full-time employment to not being employed between waves ($N = 46$)).

Changes in marital status. This was measured by four dummy variables: got married between waves, ended a marriage between waves, single at both waves, and married at both waves (reference category). ‘*Ended a marriage between waves*’ group combines those grandchildren who were married at Wave 2 and their marriage ended

between Waves 2 and 3, and those who were not married at Wave 2, got married between Waves, and their marriage ended between Waves ($N = 87$). Grandchildren who were divorced at both Waves ($N=3$) were also added to this group.

Changes in parenthood status. This was measured by three dummy variables: parent at both waves, became a parent between waves, and childless at both waves (reference category).

Granddaughter measures grandchild's gender. This measure was taken from Wave 3. It is coded 0 for *male* and 1 for *female*.

Control Variables

A number of demographic and other control variables were also included in the analyses. *Grandchild's age* was taken from Wave 3 and is measured in years. The age range of the study grandchildren is 18 -34 years. It can be argued that the findings can be affected by the inclusion of grandchildren under the age of 20 in the sample because those who get married or become parents at a younger age may be significantly different than those adopting these roles at older ages. I have included 18, 19, and 20 year olds for several reasons. First, this study also examines young adults' transitions to residential independence, higher education, and full-time employment which can be considered more or less normative for 18-to-20 year olds. Second, the sample included 228 (15.4%) grandchildren who were ages 18 to 20, out of which only 5 (0.3%) grandchildren were 18 years old. Third, only a few 18-to-20 year olds in the sample got married (6 grandchildren; 0.4% of the study total sample) and became parents (11 grandchildren; 0.7% of the study total sample) between Waves 2 and 3. Finally, I ran the OLS models restricting the sample to older grandchildren. With one exception, the results were the

same. However, the results for grandchildren's enrollment in school between waves were not statistically significant, although they were in the same direction as for the total sample in this study. This can be explained by loss of power in the latter models because the 35.6% of the study total sample who enrolled in school between waves were younger grandchildren, (i.e., ages 18 to 20 years old)

As no item regarding race or ethnicity was asked of the young adults or their parents at Waves 2 or 3, race/ethnicity of the parent was taken from the interviews with the primary respondents (i.e., a parent) at Wave 1 and used as a proxy measure of grandchild's race. Preliminary analyses showed that there were significant differences in young adults' contact with, and feelings of closeness to, maternal and paternal grandmothers between Whites and other racial or ethnic groups. Therefore, *White* was a dichotomous variable (0 = *no*, 1 = *yes*). *Number of siblings* measures how many brothers and sisters, including any step- or half-siblings, young adults had at Wave 3. Responses ranged from 0 = *no siblings* to 4 = *4 or more siblings*. *Grandchild's education* comes from Wave 3 and reflects years of education completed. It is measured in years ranging from 6 = *6th grade* to 20 = *doctorate*.

Parental education is measured in years and reflects years of education completed by one of young adult's parents. About 16% of young adults at Wave 3 and about 8% of young adults at Wave 2 did not have information on parental education because their parents did not participate at these waves. Therefore, this measure was taken from interviews with the primary respondent (i.e., a parent) at Wave 1. In addition, information is not available on educational level for the other parent of some young adults because the NSFH provides information on both parents' characteristics only for

the married primary respondents and their current spouses. For consistency purposes, I decided to use parental education of one parent (i.e., the primary respondent) as a proxy measure of the socioeconomic status of the young adult's family of origin.

The present study also controls for marital status of young adults' parents. Three dummy variables were created on the basis of parents' reports about their marital status at Wave 3. *Parents married to each other* measures whether biological parents of young adults were married to each other. *Parents not married to each other* (reference category) captures whether biological parents of young adults were not married to each other. *Missing parental marital status* captures whether the information on parental marital status was available. Missing values for parents' marital status were not imputed for several reasons. Specifically, about sixteen percent of young adults did not have information available on their parents' marital status because their parents did not participate at Wave 3. Additionally, I decided not to impute this measure because missing interviews from grandchildren's parents may be an "indicator" of marital problems. For example, parents who did not participate at Wave 3 might have divorced and moved somewhere else and as a result, it was more difficult to locate them. *Both maternal grandparents* and *both paternal grandparents* were included in order to examine whether it matters if both grandparents of a given lineage were still alive (0 = *no*, 1 = *yes*). These measures were constructed on the basis of grandchildren's reports.

Missing Data

Except for parents' marital status, missing values on all other independent and control variables were imputed using the 'ice' command in the STATA program for multiple imputations for missing data. 'Ice' imputes missing values by using switching

regression, an iterative multivariate regression technique. The proportion of missing values across study variables ranged from no missing data to 9%. The variable requiring the most imputed values was the grandchild's income. To ensure that imputed values did not bias results, other methods of accounting for missing values such as mean substitution and listwise deletion were conducted as well. The latter methods produced similar results.

Analysis

Bivariate analyses were facilitated by conducting zero-order correlations. The results are presented in Table 4.1 (p. 180). The zero-order correlations confirmed that except for the correlations between dummy variables measuring changes in the same adult role (i.e., residential independence, school enrollment, and marital status), the rest of correlations among the independent variables and control variables considered in the same regression model did not exceed .60. I also conducted Variance Inflation Factor (VIF) diagnostics in order to test whether any two independent and control variables operate similarly in their effect on dependent variables (the results are not shown). Again, except for the VIFs for dummy variables measuring changes in the same adult role (i.e., school enrollment and marital status), the rest of the VIFs were lower than 3.0. The highest VIFs were for 'got married between waves' (5.0) and for 'single at both waves' (7.0).

Models predicting contact to grandparents as a couple and closeness between grandchildren and each living grandparent were estimated separately using Ordinary Least Squares Regression (OLS). The sample size in the OLS models varied reflecting the number of respondents with each type of grandparent(s) still living. The change score

method (CS) was used rather than the lagged dependent variable (LDV) technique because the CS analysis has several advantages over the LDV regression. Johnson (2005) argues that CS is a better method for analyzing the effect of transitions on a dependent variable when using two waves of panel data because CS yields estimates unbiased by measurement error in the dependent variables. Moreover, the CS approach controls for unmeasured background variables that might have implications for the initial level of the dependent variable and the transition (Johnson, 2005).

The analysis proceeds in two steps. First, I analyzed whether changes in grandchildren's adult roles between Waves mattered for changes in contact and closeness between young adults and their grandparents over time. Second, I assessed whether the association between changes in grandchildren's adult roles and grandparent-grandchild ties varied by the gender of the grandchild (only statistically significant results are presented in Tables 3 - 5).

Results

Descriptive Statistics

Descriptive statistics is presented in Table 4.2 (p. 184). There were slightly more granddaughters (54%) in the sample than grandsons. The mean age of grandchildren was 26. The majority of young adults were White (87%). Young adults reported on contact with 932 maternal grandparents (61.2%) and 799 paternal grandparents (52.5%). Young adults rated closeness to 815 maternal grandmothers (53.5%), 495 maternal grandfathers (32.5%), 691 paternal grandmothers (45.4%), and 389 paternal grandfathers (25.5%).

Means and standard deviations with t-tests for all study variables separately for grandsons and granddaughters are presented in Tables 4.2(A) (p. 186). T-tests indicated

that mean differences between granddaughters and grandsons for some measures of grandchildren's adult roles were statistically significant. Compared to grandsons, granddaughters were more likely to live separately from their parents at both waves, to work less than full-time at least at one wave, to be not employed at both waves, to be married at both waves, to be parents at both waves, and to become parents between waves. On the other hand, grandsons were more likely than granddaughters to live with parents at both waves, to work full-time at both waves, to start working full-time between waves, to be single at both waves, and to be childless at both waves.

There was a large change over 7 - 10 years between Waves 2 and 3 in the average contact and closeness between grandchildren and their grandparents (Table 4.2(B); p. 188). Young adults perceived that their relationships with grandparents were more likely to deteriorate than improve between waves. Contact with grandparents was more likely to remain the same between waves than closeness to grandparents. At the same time, closeness with grandparents was more likely to improve between waves than contact with grandparents.

Regression Results

Change in Contact with Grandparents

The results for changes in contact with maternal grandparents and with paternal grandparents are presented in Table 4.3 (p. 189). Compared to their counterparts who lived with parents at both waves, young adults who did not live with their parents at both waves perceived decreases in contact with their paternal grandparents ($\beta = -.10, p \leq .10$). In addition, young adults who started living alone between waves reported decreased contact with their maternal ($\beta = -.15, p \leq .001$) and paternal ($\beta = -.13, p \leq .01$)

grandparents over time. In contrast to those who were not employed at both waves, grandchildren who worked full-time at both waves reported increases in contact with their paternal grandparents over time ($\beta = .10, p \leq .10$). Compared to those who were married at both waves, grandchildren who got married between waves ($\beta = -.14, p \leq .10$), who ended a marriage between waves ($\beta = -.08, p \leq .10$), or who were single at both waves ($\beta = -.16, p \leq .10$) reported decreases in contact with their maternal grandparents. Compared to those who were childless at both waves, grandchildren who were parents at both waves perceived increases in contact with their maternal grandparents over time ($\beta = .09, p \leq .05$). Changes in grandchildren's school enrollment were not predictive of changes in contact with grandparents.

Change in Closeness to Maternal Grandparents

The results for changes in closeness to maternal grandmothers and grandfathers are presented in Table 4.4 (p. 190). Changes in residential independence, school enrollment, and marital status were predictive of changes in closeness to maternal grandmothers. Compared to their counterparts who lived with their parents at both waves, young adults who did not live with their parents at both waves reported decreases in closeness to their maternal grandmothers over time ($\beta = -.09, p \leq .10$). Tests of interaction terms between changes in grandchildren's adult roles and the grandchild's gender indicated that unlike granddaughters, grandsons who were not enrolled in school at both waves experienced increases in closeness to their maternal grandmothers. Additionally, tests of interaction terms also demonstrated that unlike grandsons, granddaughters who ended a marriage between waves did not perceive decreases in

closeness to their maternal grandmothers over time. Models run separately for grandsons and granddaughters confirmed these results.

Changes in full-time employment, marital status, and parenthood status were associated with changes in closeness to maternal grandfathers. Compared to those who were not employed at both waves, young adults who worked full-time at both waves reported decreases in closeness with their maternal grandfathers over time ($\beta = -.13, p \leq .10$). Unlike their counterparts who were married at both waves, young adults who ended a marriage between waves ($\beta = .14, p \leq .05$) or those who were single at both waves ($\beta = .31, p \leq .05$) perceived increases in closeness with their maternal grandfathers over time. Compared to those who were childless at both waves, young adults who became parents between waves experienced decreases in closeness with their maternal grandfathers ($\beta = -.20, p \leq .10$).

Change in Closeness to Paternal Grandparents

The results for changes in closeness to paternal grandmothers and grandfathers are presented in Table 4.5 (p. 191). Changes in school enrollment, full-time employment, and parenthood status were associated with changes in closeness to paternal grandmothers. Young adults who were enrolled in school between waves reported increases in closeness to their paternal grandmothers over time ($\beta = .17, p \leq .05$), compared to those who left school between waves. Interaction terms between changes in grandchildren's adult roles and the grandchild's gender revealed that only grandsons, but not granddaughters, who started working full-time between waves perceived decreases in closeness to their paternal grandmothers. Additionally, tests of interaction terms indicated that unlike granddaughters, grandsons who were parents at both waves

experienced increases in closeness to their paternal grandmothers over time. On the other hand, interaction terms demonstrated that compared to grandsons, granddaughters who became parents between waves reported increases in closeness to their maternal grandmothers. Separate models for grandsons and granddaughters confirmed the results for interaction terms.

Changes in full-time employment, marital status, and parenthood status were related to changes in closeness to paternal grandfathers. Unlike those who were not employed at both waves, grandchildren who worked full-time at both waves ($\beta = -.24, p \leq .01$) or who started working full-time between waves ($\beta = -.15, p \leq .05$) reported decreases in closeness with their paternal grandfathers. Compared to those who were married at both waves, young adults who got married between waves ($\beta = .32, p \leq .01$) or those who were single at both waves ($\beta = .31, p \leq .05$) perceived increases in closeness to their paternal grandfathers. Tests of interaction terms between changes in grandchildren's adult roles and the grandchild's gender indicated that only grandsons, but not granddaughters, who were parents at both waves experienced increases in closeness with paternal grandfathers. The latter finding was confirmed by models run separately for grandsons and granddaughters.

Discussion

Changes in Grandchildren's Adult Roles

This study provides strong evidence that changes in grandchildren's adult roles related to residential independence, enrollment in school, full-time employment, marriage, and parenthood can matter for changes in contact and closeness between young adults and their grandparents over time. A summary of findings is presented in Table 4.6

(p. 192). Such findings are in accord with the life course proposition that family members' transitions are interdependent and can shape family relationships (Elder, 1985, 1991, 1994). This study however, does not document consistent support for Rosow's role framework or for the intergenerational similarity hypothesis paired with the family stress model. A summary of theoretical findings is presented in Table 4.7 (p. 193). .

Specifically, similar to Mills's research (1999), grandchildren's adult roles were found to be related to stronger as well as weaker grandparent-grandchild ties. Also, the results indicate that the direction of the change in the grandparent-grandchild relationship is linked to the nature of the role in question as well as to a specific dimension of intergenerational solidarity between young adults and their grandparents (i.e., contact vs. closeness), lineage, and gender. Although the associations between changes in grandchildren's adult roles and the grandparent-grandchild bond are complex, several patterns emerge from the findings.

Residential Independence

Young adults' residential independence stands out as an important factor associated with grandchildren experiencing decreases in contact with their grandparents, regardless of lineage. Separate residence at both waves was related to decreases in contact with paternal grandparents, whereas the acquisition of separate residence between waves was predictive of decreases in contact with maternal and paternal grandparents. Note that separate residence at both waves was also negatively associated with changes in closeness to maternal grandmothers. These findings are consistent with Rosow's role framework which suggests that residential independence brings new concerns and responsibilities into grandchildren's lives and limits the amount of time and energy that

they can devote to their grandparents. It is also possible that these findings may indicate grandchildren's lack of closeness with family of origin, including grandparents, in general. Another plausible explanation for these findings is that the establishment of the residential independence may be linked to increases in geographic distance between young adults and their grandparents. It was not possible to control for geographic proximity in this study because this information is not available in the NSFH. Additional studies examining geographic distance would allow for a more precise interpretation of these findings. Another reason for the negative association between young adults' residential independence and the grandparent-grandchild relationship is that grandchildren's coresidence with their parents makes it easier for parents to act as mediators between the grandparent and grandchild generations. Parents can provide extra opportunities for grandparent-grandchild interactions. Overall, regardless of the underlying reason, these findings suggest that young adults who do not live with their parents may be less available to their grandparents.

Enrollment in School

The analysis yielded limited evidence that changes in grandchildren's enrollment in school were associated with changes in young adults' relationships with their grandparents. In support of the intergenerational similarity hypothesis and the family stress model, enrollment in school between waves was predictive of increases in closeness with paternal grandmothers over time. This result is consistent with Crosnoe and Elder's (2002) study that found that grandchildren's enrollment in higher education was linked to improvements in the grandparent-grandchild relationship. Note that Crosnoe and Elder (2002) did not take into account lineage. Additionally, the present

study indicates that grandsons who were not enrolled in school at both waves reported increases in closeness with their maternal grandmothers. The latter finding supports Rosow's role framework.

Full-Time Employment

The current study demonstrates that grandchildren's full-time employment can have positive as well as negative implications for the grandparent-grandchild relationship. Consistent with the intergenerational similarity hypothesis and the family stress model, grandchildren who worked full-time at both waves perceived increases in contact with their paternal grandparents. In addition to being viewed as a positive change in grandchildren's lives, full-time employment can provide young adults with additional resources (e.g., financial ones) for their interactions with grandparents. Another plausible explanation for this finding is that grandchildren who had stable employment in both waves were less likely to move away in search of jobs than other grandchildren. On the other hand, full-time employment at both waves was predictive of reduced closeness between young adults and grandfathers, regardless of lineage. Also, grandsons who started working full-time between waves reported decreases in closeness with their paternal grandmothers. The same was true for grandchildren of both genders and closeness to paternal grandfathers. The negative association between full-time employment and the grandparent-grandchild bond is in accord with the contention of Rosow's role framework that due to competing responsibilities and time constraints, the role of grandchild becomes less salient to individuals when they acquire adult roles.

Marital Status

Findings indicate that compared to those who were married at both waves, grandchildren who got married between waves, ended a marriage between waves, or were single at both waves reported reduced contact with their maternal grandparents. These results are in part consistent with the intergenerational similarity hypothesis and the family stress model. Unlike the transition to marriage, being married for several years seems to provide additional opportunities for young adults' involvement with their maternal grandparents. In contrast, grandchildren who got married between waves experienced improvements in closeness with their paternal grandfathers over time. The latter finding provides support for the intergenerational similarity hypothesis and the family stress model and suggests that young adults' transition to marriage can create extra linkages (e.g., through similar experiences and increased understanding) between newly weds and their paternal grandfathers. Nevertheless, uncoupled grandchildren reported increases in closeness with their maternal grandparents and paternal grandfathers over time. Specifically, young adults who ended a marriage between waves experienced increases in closeness with their maternal grandmothers and grandfathers. In case of maternal grandmothers, it was true only for granddaughters. Further, grandchildren who were single at both waves experienced increases in closeness with their grandfathers, regardless of lineage. These findings are in accord with Rosow's role framework. It appears that young adults who are not married have more time and energy to devote to their grandparents than do their counterparts who have been married for a few years. Another possible explanation is that unpartnered grandchildren look for closeness in their relationships with grandparents when they cannot find it in intimate relationships.

Parenthood Status

The current analysis provides evidence of the positive link between parenthood status and the grandparent-grandchild relationship. Young adults who were parents at both waves reported increased contact with their maternal grandparents. Additionally, parenthood at both waves was predictive of improvements in closeness to paternal grandmothers and grandfathers for grandsons. Furthermore, granddaughters who became parents between waves experienced increases in closeness with paternal grandmothers. In support of the intergenerational similarity hypothesis and the family stress model, the current study suggests that young adults' children can create additional opportunities for the grandparent-adult grandchild involvement. Another plausible reason for the special relationship that grandsons who are parents develop with paternal grandparents may relate to the paternal grandparents' aspiration that the family name would carry on. At the same time, the current analysis also yields support for Rosow's role framework. Thus, grandchildren who became parents between waves experienced reduced closeness with maternal grandfathers. It seems that a recent birth of the first child may also strain the grandparent-grandchild relationship when young adults adjust to this new role.

Summary

This study found mixed support for Rosow's role framework as well as for the intergenerational similarity hypothesis paired with the family stress model. Further, the results of this study suggest that in addition to the justifications proposed by these theoretical perspectives, several other factors may help explain variations in the associations between changes in grandchildren's adult roles and changes in the grandparent-grandchild bond. In other words, time and energy constraints, similarity in

experiences, and positive vs. negative evaluations of grandchildren's adult roles can be only partially accountable for the patterns of these associations.

For example, negative associations between grandchildren's residential independence and grandparent-grandchild contact can be explained by decreased opportunities for young adults' parents to act as mediators between grandparents and grandchildren. Additionally, future research controlling for geographic proximity between young adults and their grandparents may help better explain these associations. Geographic distance may also shed light on the positive association between full-time employment for several years and contact with paternal grandparents: grandchildren with stable full-time employment might have been less likely to move away. Moreover, grandchildren with stable full-time employment can have additional resources (e.g., financial stability) for interactions with their grandparents. Being married for several years or being a parent for several years can also provide extra opportunities for interactions between grandparents and grandchildren. Finally, the positive implications of grandchildren's divorce and bachelorhood for the grandparent-grandchild bond can be explained by the opportunity for grandparents to provide emotional support and understanding to their grandchildren in time of need. In sum, future research as well as theoretical debates about the associations between grandchildren's adult roles and the grandparent-grandchild relationship may benefit from taking into consideration the following factors: the mediating role of parents, geographic proximity, additional resources and opportunities related to adult roles, and the role of grandparents as grandchildren's confidants.

Grandchild's Gender

The present study extends prior research in this area by examining whether young adults' gender moderates the association between changes in grandchildren's adult roles and changes in the grandparent-grandchild bond. The argument that changes in family roles have a stronger effect on granddaughters' ties to their grandparents, whereas changes in non-family roles have a stronger effect on grandsons' ties to their grandparents received limited support. More specifically, a divorce and a birth of the first child between waves were predictive of changes in closeness to grandparents only for granddaughters, while the transition to full-time employment between waves and non-student status at both waves were related to changes in closeness to grandparents only for grandsons. However, contrary to expectations, parenthood at both waves was predictive of changes in closeness to paternal grandparents only for grandsons.

Limitations of the Research

Several limitations of this research should be considered when interpreting its findings. As discussed above the present study did not control for geographic distance between young adults and their grandparents, because this information is not available in the NSFH. Also, the current study did not control for grandparents' characteristics. Information on these characteristics is available only for certain grandparents, depending on marital status of young adults' parents. Moreover, grandparents' perspective is not represented in this research. Deeper understanding of variations in the grandparent-grandchild bond related to grandchildren's adult roles could be developed by comparing the reports from the both generations. Additionally, it would be helpful to consider additional dimensions of intergenerational solidarity between adult grandchildren and

their grandparents in future studies (e.g., exchanges of support). Finally, the present research relied on survey data. Qualitative research using in-depth interviews would allow a more precise interpretation of the associations between changes in grandchildren's adult roles and the grandparent-grandchild relationship.

Conclusion

Despite its limitations, this study which builds on previous theoretical and empirical work provides consistent evidence that changes in grandchildren's adult roles are associated with changes in contact and closeness between young adults and their grandparents. Findings suggest that it is important to differentiate between maternal and paternal grandparents and between grandmothers and grandfathers. Also, research that takes into account lineage and gender may help better understand the variations in the grandparent-grandchild bond related to grandchildren's adult roles.

The findings of the present study can be helpful to family practitioners, policy-makers, and mental health professionals who are concerned with continuity of intergenerational relationships and who assist family members with managing their complex roles, including caregiving responsibilities. Intergenerational relationships are consequential for family members' overall wellbeing. Also, grandchildren can potentially become co-caregivers or even primary caregivers for their grandparents. Grandchildren's assistance to their grandparents is becoming even more important today when the worldwide population aging is likely to entail shortages of national resources allocated to health care and other types of services for the elderly (Gauthier, 2002; Putney & Bengtson, 2003). The present study did not examine directly whether changes in grandchildren's adult roles affect exchanges of support between young adults and their

grandparents because this information is not available in the NSFH. However, contact and closeness can serve as indicators of possible exchanges of assistance between the two generations.

Overall, in spite of the complexity of its findings, the present study suggests that there are times in the life course when grandchildren may be less likely to help their grandparents if the latter need help. Specifically, grandchildren's residential independence and full-time employment were associated with decreases in grandparent-grandchild ties. These findings suggest that under certain circumstance, family caretakers of the elderly may have to rely on outside resources, such as caregiving services. These findings also suggest that it is important to educate family members about the consequences of grandchildren's adult roles for the grandparent-grandchild bond as well as about importance of intergenerational ties for individuals. For instance, in order to strengthen the grandparent-grandchild bond, grandparents should be encouraged to initiate interactions with their grandchildren when the latter have limited time and energy to invest in the grandparent-grandchild relationship. In fact, the findings that grandchildren's divorce between waves, bachelorhood at both waves, parenthood at both waves, and transition to parenthood between waves were linked to improvements in young adults' ties to their grandparents suggest that during the transition to adulthood, grandchildren may also turn to their grandparents in times of need. Grandparents, for example, may provide adult grandchildren with emotional support as well as with other kinds of help (e.g., financial assistance or babysitting).

Table 4.1. Zero-Order Correlations.

| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--|---------|---------|---------|---------|---------|---------|--------|
| 1. Separate residence at both waves | - | | | | | | |
| 2. Started living alone between waves | -.57*** | - | | | | | |
| 3. Enrolled in school between waves | -.20*** | .13*** | - | | | | |
| 4. Not enrolled in school at both waves | -.02 | -.07* | -.67*** | - | | | |
| 5. Worked full-time at both waves | .21*** | -.06* | -.22*** | .18*** | - | | |
| 6. Started working full-time between waves | -.06* | -.01 | -.13*** | .03 | -.48*** | - | |
| 7. Worked less than full-time at least at one wave | -.02 | .01 | .12*** | -.07** | -.22*** | -.39*** | - |
| 8. Got married | .13*** | .16*** | -.22*** | -.03 | .15*** | -.01 | .01 |
| 9. Ended a marriage | .03 | -.01 | -.05† | .06* | .13*** | -.01 | -.04† |
| 10. Single at both waves | -.30*** | -.05* | .27*** | -.06* | -.29*** | .10*** | -.02 |
| 11. Parent at both waves | .31*** | -.18*** | -.10*** | .14*** | .14*** | -.09** | .01 |
| 12. Became a parent between waves | .11*** | .08** | -.19*** | .08** | .15*** | -.12*** | .09** |
| 13. Granddaughter | .05† | .03 | .03 | -.03 | -.16*** | -.06* | .18*** |
| 14. Grandchild's age | .52*** | -.17*** | -.39*** | .03 | .51*** | -.15*** | .01 |
| 15. White | .12*** | .06* | .03 | -.08** | .05* | -.02 | .03 |
| 16. Number of siblings | .08** | -.06* | -.08** | .08** | .03 | -.01 | .01 |
| 17. Grandchild's education | .24*** | -.09** | -.09*** | -.22*** | .03 | .11*** | -.04 |
| 18. Parental education | .03 | .03 | .13*** | -.16*** | -.10*** | .02 | .01 |
| 19. Parents married to each other | -.04 | .04† | .09*** | -.11*** | .01 | -.03 | .01 |
| 20. Missing parental marital status | -.04 | -.01 | -.07** | .06* | .04 | -.01 | -.01 |
| 21. Both maternal grandparents alive | -.13*** | .08** | .10*** | -.03 | -.08** | .01 | -.02 |
| 22. Both paternal grandparents alive | -.13*** | .03 | .11*** | .01 | -.14*** | .03 | .03 |
| 23. Contact with maternal grandparents | .15*** | -.15*** | -.09** | .03 | .10** | -.05 | -.01 |
| 24. Contact with paternal grandparents | .06 | -.09* | -.02 | .01 | .13*** | -.02 | -.05 |
| 25. Closeness to maternal grandmother | .06† | -.04 | -.13*** | .07* | .08* | .05 | -.01 |
| 26. Closeness to maternal grandfather | .11* | -.04 | -.11* | .08† | -.01 | .07 | -.01 |
| 27. Closeness to paternal grandmother | .16*** | -.03 | -.03 | -.01 | .11** | -.02 | -.02 |
| 28. Closeness to paternal grandfather | .20*** | -.01 | -.09† | .08 | -.01 | -.02 | -.03 |

Table 4.1. Continued.

| Variables | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|--|---------|---------|---------|---------|---------|-------|---------|---------|
| 8. Got married | - | | | | | | | |
| 9. Ended a marriage | -.15*** | - | | | | | | |
| 10. Single at both waves | -.77*** | -.27*** | - | | | | | |
| 11. Parent at both waves | -.04† | .08** | -.22*** | - | | | | |
| 12. Became a parent between waves | .40*** | .12*** | -.49*** | -.17*** | - | | | |
| 13. Granddaughter | .04 | .01 | -.09*** | .09*** | .10*** | - | | |
| 14. Grandchild's age | .30*** | .14*** | -.52*** | .28*** | .28*** | -.06* | - | |
| 15. White | .11*** | -.01 | -.14*** | -.07** | .04 | -.01 | .09*** | - |
| 16. Number of siblings | .04 | .09** | -.07** | .09*** | .05* | .02 | .06* | .13*** |
| 17. Grandchild's education | .14*** | -.10*** | -.08** | -.15*** | -.02 | .07* | .29*** | .12*** |
| 18. Parental education | -.03 | -.08** | .08** | -.13*** | -.10*** | -.01 | -.03 | .16*** |
| 19. Parents married to each other | .01 | -.08** | .03 | -.10*** | -.04 | -.02 | -.05† | .13*** |
| 20. Missing parental marital status | .07** | .02 | -.05* | .04 | .07** | .03 | .04† | -.16*** |
| 21. Both maternal grandparents alive | -.04 | -.03 | .10*** | -.04† | -.09*** | .05* | -.26*** | .03 |
| 22. Both paternal grandparents alive | -.07** | -.03 | .11*** | -.06* | -.08** | -.01 | -.27*** | .05† |
| 23. Contact with maternal grandparents | .01 | -.01 | -.08* | .14*** | .02 | .01 | .15*** | .03 |
| 24. Contact with paternal grandparents | .03 | .04 | -.06† | .08* | .03 | -.01 | .11** | .06 |
| 25. Closeness to maternal grandmother | -.02 | .03 | -.02 | .06 | -.02 | .04 | .19*** | -.05 |
| 26. Closeness to maternal grandfather | -.04 | .09† | .01 | .11* | -.08† | .05 | .17*** | -.06 |
| 27. Closeness to paternal grandmother | .04 | .06 | -.12** | .12** | .07† | .02 | .25*** | .02 |
| 28. Closeness to paternal grandfather | .11* | .02 | -.12* | .23*** | .01 | -.04 | .17** | .02 |

Table 4.1. Continued.

| Variables | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|--|---------|--------|---------|---------|--------|--------|-------|--------|
| 16. Number of siblings | - | | | | | | | |
| 17. Grandchild's education | -.10*** | - | | | | | | |
| 18. Parental education | -.12*** | .27*** | - | | | | | |
| 19. Parents married to each other | -.25*** | .11*** | .13*** | - | | | | |
| 20. Missing parental marital status | .09** | -.02 | -.17*** | -.40*** | - | | | |
| 21. Both maternal grandparents alive | -.01 | -.04 | .01 | .04 | -.07** | - | | |
| 22. Both paternal grandparents alive | -.04 | -.09** | .04 | .04 | -.08** | .17*** | - | |
| 23. Contact with maternal grandparents | -.01 | .07* | .04 | -.02 | -.01 | .08* | -.03 | - |
| 24. Contact with paternal grandparents | .04 | -.01 | -.01 | -.03 | .01 | .01 | -.07† | .18*** |
| 25. Closeness to maternal grandmother | -.04 | .12** | .03 | -.11** | .05 | -.01 | -.06† | .19*** |
| 26. Closeness to maternal grandfather | -.01 | .13** | .02 | -.06 | .09† | .05 | -.10* | .08† |
| 27. Closeness to paternal grandmother | .07† | .14*** | -.04 | .01 | -.02 | -.02 | -.07† | .08† |
| 28. Closeness to paternal grandfather | .06 | .03 | .01 | -.08 | -.02 | .04 | .03 | .09 |

Table 4.1. Continued.

| Variables | 24 | 25 | 26 | 27 | 28 |
|--|--------|--------|--------|--------|----|
| 24. Contact with paternal grandparents | - | | | | |
| 25. Closeness to maternal grandmother | .07 | - | | | |
| 26. Closeness to maternal grandfather | -.01 | .55*** | - | | |
| 27. Closeness to paternal grandmother | .33*** | .24*** | .30*** | - | |
| 28. Closeness to paternal grandfather | .27*** | .28*** | .30*** | .73*** | - |

† $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 4.2. Descriptive Statistics.

| Variables | <i>M</i> | <i>SD</i> | <i>Range</i> | <i>Unweighted N</i> |
|--|----------|-----------|-----------------------|-------------------------|
| <u>Dependent Variables</u> | | | | |
| 1. Change in contact with maternal grandparents | -.58 | 1.15 | -4 – 4 | 932 |
| 2. Change in contact with paternal grandparents | -.64 | 1.19 | -4 – 4 | 799 |
| 3. Change in closeness to maternal grandmother | -1.17 | 2.40 | -10 – 8 | 815 |
| 4. Change in closeness to maternal grandfather | -1.40 | 2.65 | -10 – 8 | 495 |
| 5. Change in closeness to paternal grandmother | -1.39 | 2.77 | -10 – 10 | 691 |
| 6. Change in closeness to paternal grandfather | -1.55 | 2.67 | -9 – 10 | 389 |
| <u>Independent Variables</u> | | | | |
| 7. Separate residence at both waves | .21 | .41 | 0 (no) – 1 (yes) | 1,523 |
| 8. Started living alone between waves | .55 | .50 | 0 (no) – 1 (yes) | 1,523 |
| 9. Lived with parents at both waves (reference category) | .24 | .43 | 0 (no) – 1 (yes) | 1,523 |
| 10. Enrolled in school between waves | .24 | .43 | 0 (no) – 1 (yes) | 1,523 |
| 11. Not enrolled in school at both waves | .58 | .49 | 0 (no) – 1 (yes) | 1,523 |
| 12. Left school between waves (reference category) | .18 | .38 | 0 (no) – 1 (yes) | 1,523 |
| 13. Worked full-time at both waves | .21 | .41 | 0 (no) – 1 (yes) | 1,523 |
| 14. Started working full-time between waves | .46 | .50 | 0 (no) – 1 (yes) | 1,523 |
| 15. Worked less than full-time at least at one wave | .15 | .36 | 0 (no) – 1 (yes) | 1,523 |
| 16. Not employed at both waves (reference category) | .18 | .39 | 0 (no) – 1 (yes) | 1,523 |
| 17. Got married between waves | .29 | .45 | 0 (no) – 1 (yes) | 1,523 |
| 18. Ended a marriage between waves | .05 | .22 | 0 (no) – 1 (yes) | 1,523 |
| 19. Single at both waves | .59 | .49 | 0 (no) – 1 (yes) | 1,523 |
| 20. Married at both waves (reference category) | .07 | .26 | 0 (no) – 1 (yes) | 1,523 |
| 21. Parent at both waves | .08 | .26 | 0 (no) – 1 (yes) | 1,523 |
| 22. Became a parent between waves | .27 | .44 | 0 (no) – 1 (yes) | 1,523 |
| 23. Childless at both waves (reference category) | .66 | .47 | 0 (no) – 1 (yes) | 1,523 |
| 24. Grandchild's gender | .52 | .50 | 0 (male) – 1 (female) | 1,523 |

Table 4.2. Continued.

| Variables | <i>M</i> | <i>SD</i> | <i>Range</i> | <i>Unweighted N</i> |
|---|----------|-----------|---|-------------------------|
| <u>Control variables</u> | | | | |
| 25. Grandchild's age | 25.78 | 4.44 | 18 – 34 | 1,523 |
| 26. White | .87 | .33 | 0 (no) - 1 (yes) | 1,523 |
| 27. Number of siblings | 2.06 | 1.24 | 0 – 4 (4 or more) | 1,523 |
| 28. Grandchild's education | 13.84 | 1.71 | 6 (6 th grade) – 20 (doctorate) | 1,523 |
| 29. Parental education | 13.65 | 2.61 | 3 (3 rd grade) – 20 (doctorate) | 1,523 |
| 30. Parents married to each other | .54 | .50 | 0 (no) - 1 (yes) | 1,523 |
| 31. Parents not married to each other (reference category) | .34 | .47 | 0 (no) - 1 (yes) | 1,523 |
| 32. Missing parental marital status | .12 | .33 | 0 (no) - 1 (yes) | 1,523 |
| 33. Both maternal grandparents alive | .25 | .43 | 0 (no) - 1 (yes) | 1,523 |
| 34. Both paternal grandparents alive | .19 | .39 | 0 (no) - 1 (yes) | 1,523 |

Note: Weighted means and standard deviations are shown.

Table 4.2(A). Descriptive Statistics Separately for Grandsons and Granddaughters and T-Test.

| Variables | Grandsons <i>N</i> = 716 ¹ | | Granddaughters <i>N</i> = 807 ¹ | | <i>t</i> -test |
|--|--|-----------|---|-----------|---------------------|
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> difference |
| <u>Dependent Variables</u> | | | | | |
| 1. Change in contact with maternal grandparents | -.59 | 1.01 | -.57 | 1.27 | -.03 |
| 2. Change in contact with paternal grandparents | -.64 | 1.17 | -.64 | 1.20 | 0 |
| 3. Change in closeness to maternal grandmother | -1.27 | 2.26 | -1.07 | 2.51 | -.20 |
| 4. Change in closeness to maternal grandfather | -1.55 | 2.75 | -1.29 | 2.57 | -.27 |
| 5. Change in closeness to paternal grandmother | -1.44 | 2.53 | -1.35 | 2.96 | -.09 |
| 6. Change in closeness to paternal grandfather | -1.43 | 2.63 | -1.65 | 2.71 | .22 |
| <u>Independent Variables</u> | | | | | |
| 7. Separate residence at both waves | .19 | .39 | .23 | .42 | -.04† |
| 8. Started living alone between waves | .54 | .50 | .57 | .50 | -.03 |
| 9. Lived with parents at both waves (reference category) | .28 | .45 | .21 | .41 | .07** |
| 10. Enrolled in school between waves | .23 | .42 | .25 | .44 | -.03 |
| 11. Not enrolled in school at both waves | .60 | .49 | .57 | .50 | .03 |
| 12. Left school between waves (reference category) | .17 | .38 | .18 | .38 | -.01 |
| 13. Worked full-time at both waves | .28 | .45 | .15 | .36 | .13*** |
| 14. Started working full-time between waves | .49 | .50 | .43 | .50 | .06* |
| 15. Worked less than full-time at least at one wave | .08 | .27 | .21 | .41 | -.13*** |
| 16. Not employed at both waves (reference category) | .15 | .36 | .21 | .40 | -.05** |
| 17. Got married between waves | .27 | .44 | .31 | .46 | -.04 |
| 18. Ended a marriage between waves | .05 | .21 | .05 | .22 | .01 |
| 19. Single at both waves | .64 | .48 | .55 | .50 | .09*** |
| 20. Married at both waves (reference category) | .05 | .21 | .09 | .29 | -.05*** |
| 21. Parent at both waves | .05 | .22 | .10 | .30 | -.05*** |
| 22. Became a parent between waves | .22 | .42 | .31 | .46 | -.09*** |
| 23. Childless at both waves (reference category) | .73 | .45 | .59 | .49 | .13*** |
| 24. Grandchild's gender | - | - | - | - | - |

Table 4.2(A). Continued.

| Variables | Grandsons <i>N</i> = 716 ¹ | | Granddaughters <i>N</i> = 807 ¹ | | <i>t</i> -test |
|---|--|-----------|---|-----------|---------------------|
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> difference |
| <u>Control variables</u> | | | | | |
| 25. Grandchild's age | 26.05 | 4.54 | 25.54 | 4.33 | .51* |
| 26. White | .88 | .33 | .87 | .34 | .01 |
| 27. Number of siblings | 2.03 | 1.27 | 2.09 | 1.21 | -.06 |
| 28. Grandchild's education | 13.72 | 1.68 | 13.95 | 1.74 | -.23* |
| 29. Parental education | 13.66 | 2.62 | 13.65 | 2.60 | .01 |
| 30. Parents married to each other | .55 | .50 | .53 | .50 | .02 |
| 31. Parents not married to each other (reference category) | .34 | .47 | .34 | .47 | 0 |
| 32. Missing parental marital status | .11 | .32 | .13 | .33 | -.02 |
| 33. Both maternal grandparents alive | .22 | .42 | .27 | .44 | -.05* |
| 34. Both paternal grandparents alive | .20 | .40 | .19 | .39 | .01 |

¹The sample size varied across measures of the grandparent-grandchild bond reflecting the number of respondents with each type of grandparent still living.

Note: Weighted means and standard deviations are shown. Unweighted *N*s are shown.

† $\leq .10$. * $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$

Table 4.2(B). Descriptive Statistics: Changes between Waves in Grandparent-Grandchild Relationships.

| Variables | Deterioration | The Same | Improvement | <i>Unweighted N</i> |
|---|---------------|----------|-------------|-------------------------|
| <u>Dependent Variables</u> | | | | |
| 1. Change in contact with maternal grandparents | 51.0 | 36.0 | 13.0 | 932 |
| 2. Change in contact with paternal grandparents | 53.0 | 34.1 | 12.9 | 799 |
| 3. Change in closeness to maternal grandmother | 55.7 | 25.1 | 19.2 | 815 |
| 4. Change in closeness to maternal grandfather | 58.7 | 22.0 | 19.3 | 495 |
| 5. Change in closeness to paternal grandmother | 63.9 | 13.7 | 22.4 | 691 |
| 6. Change in closeness to paternal grandfather | 56.9 | 25.0 | 18.1 | 389 |

Note: Weighted percentages are shown.

Table 4.3. Ordinary Least Squares Regression Results for Change in Contact with Grandparents.

| Reference Category | Variables | Maternal grandparents | | | Paternal grandparents | | |
|----------------------------------|---|-----------------------|-------------|---------|-----------------------|-------------|---------|
| | | <i>B</i> | <i>SE B</i> | β | <i>B</i> | <i>SE B</i> | β |
| Lived with parents at both waves | Separate residence at both waves | -.15 | .16 | -.05 | -.32 | .18 | -.10† |
| | Started living alone between waves | -.36 | .10 | -.15*** | -.31 | .11 | -.13** |
| Left school between waves | Enrolled in school between waves | -.17 | .15 | -.07 | .15 | .19 | .06 |
| | Not enrolled in school at both waves | -.04 | .13 | -.02 | .01 | .16 | .01 |
| Not employed at both waves | Worked full-time at both waves | -.07 | .16 | -.02 | .33 | .18 | .10† |
| | Started working full-time between waves | -.13 | .11 | -.06 | .04 | .12 | .02 |
| | Worked less than full-time at least at one wave | -.11 | .14 | -.03 | -.14 | .15 | -.04 |
| Married at both waves | Got married between waves | -.35 | .19 | -.14† | .24 | .22 | .09 |
| | Ended a marriage between waves | -.47 | .26 | -.08† | .13 | .29 | .02 |
| | Single at both waves | -.37 | .21 | -.16† | .17 | .24 | .07 |
| Childless at both waves | Parent at both waves | .46 | .20 | .09* | .33 | .24 | .07 |
| | Became a parent between waves | .05 | .11 | .02 | .06 | .13 | .02 |
| | Granddaughter | .02 | .08 | .01 | .04 | .09 | .02 |
| | Grandchild's age | .03 | .02 | .09 | .02 | .02 | .08 |
| | White | .13 | .13 | .04 | .27 | .14 | .07† |
| | Number of siblings | -.03 | .03 | -.03 | .03 | .04 | .04 |
| | Grandchild's education | .04 | .03 | .04 | -.02 | .03 | -.02 |
| | Parental education | .02 | .02 | .04 | .01 | .02 | .02 |
| | Parents married to each other | -.04 | .09 | -.02 | -.05 | .09 | -.02 |
| | Missing parental marital status | -.03 | .14 | -.01 | -.01 | .17 | -.01 |
| | Both maternal grandparents alive | .28 | .08 | .12*** | -.14 | .09 | -.06 |
| | <i>R</i> ² | .08*** | | | .04* | | |
| | <i>Unweighed N</i> | 932 | | | 799 | | |

Note: *B* – unstandardized beta, β – standardized beta.

† < .10. **p* < .05. ***p* < .01. ****p* < .001.

Table 4.4. Ordinary Least Squares Regression Results for Change in Closeness to Maternal Grandparents.

| Reference Category | Variables | Grandmothers | | | Grandfathers | | |
|----------------------------------|--|--------------|-------------|---------|--------------|-------------|---------|
| | | <i>B</i> | <i>SE B</i> | β | <i>B</i> | <i>SE B</i> | β |
| Lived with parents at both waves | Separate residence at both waves | -.56 | .33 | -.09† | .86 | .52 | .10 |
| | Started living alone between waves | -.10 | .21 | -.02 | .26 | .30 | .05 |
| Left school between waves | Enrolled in school between waves | -.02 | .33 | -.01 | .09 | .52 | .02 |
| | Not enrolled in school at both waves | .78 | .33 | .16* | .54 | .44 | .10 |
| Not employed at both waves | Worked full-time at both waves | -.04 | .35 | -.01 | -.98 | .51 | -.13† |
| | Started working full-time between waves | .29 | .24 | .06 | .16 | .34 | .03 |
| | Worked less than full-time at least at one wave | .12 | .30 | .02 | .04 | .41 | .01 |
| Married at both waves | Got married between waves | -.15 | .42 | -.03 | 1.04 | .75 | .18 |
| | Ended a marriage between waves | -.92 | .70 | -.08 | 2.18 | .97 | .14* |
| | Single at both waves | .15 | .46 | .03 | 1.76 | .80 | .31* |
| Childless at both waves | Parent at both waves | -.03 | .45 | -.01 | .49 | .68 | .04 |
| | Became a parent between waves | -.32 | .25 | -.06 | -.63 | .38 | -.20† |
| | Granddaughter | .70 | .25 | .15** | .61 | .25 | .11* |
| | Grandchild's age | .16 | .04 | .29*** | .18 | .05 | .27*** |
| | White | -.30 | .27 | -.04 | -.48 | .41 | -.05 |
| | Number of siblings | -.11 | .07 | -.06 | -.05 | .11 | -.02 |
| | Grandchild's education | .09 | .06 | .06 | .09 | .09 | .05 |
| | Parental education | .04 | .04 | .04 | .04 | .05 | .04 |
| | Parents married to each other | -.53 | .19 | -.11** | .08 | .28 | .02 |
| | Missing parental marital status | -.04 | .31 | -.01 | 1.20 | .45 | .13** |
| | Both maternal grandparents alive | .20 | .17 | .04 | .47 | .28 | .08† |
| | Not enrolled in school at both waves x granddaughter | -.73 | .34 | -.14* | | | |
| | Ended a marriage between waves x granddaughter | 1.56 | .82 | .10† | | | |
| | <i>R</i> ² | .09*** | | | .11*** | | |
| | <i>Unweighted N</i> | 815 | | | 495 | | |

Note: *B* – unstandardized beta, β – standardized beta.

† < .10. **p* < .05. ***p* < .01. ****p* < .001.

Table 4.5. Ordinary Least Squares Regression Results for Change in Closeness to Paternal Grandparents.

| Reference Category | Variables | Grandmother | | | Grandfather | | |
|----------------------------------|---|-------------|-------------|---------|-------------|-------------|---------|
| | | <i>B</i> | <i>SE B</i> | β | <i>B</i> | <i>SE B</i> | β |
| Lived with parents at both waves | Separate residence at both waves | .01 | .45 | .01 | 1.02 | .63 | .12 |
| | Started living alone between waves | .20 | .26 | .04 | .35 | .33 | .06 |
| Left school between waves | Enrolled in school between waves | 1.03 | .45 | .17* | .43 | .68 | .08 |
| | Not enrolled in school at both waves | .53 | .39 | .09 | .94 | .60 | .17 |
| Not employed at both waves | Worked full-time at both waves | -.60 | .45 | -.08 | -1.98 | .61 | -.24** |
| | Started working full-time between waves | -.58 | .38 | -.10 | -.78 | .39 | -.15* |
| | Worked less than full-time at least at one wave | -.55 | .37 | -.07 | -.65 | .46 | -.09 |
| Married at both waves | Got married between waves | -.23 | .54 | -.04 | 2.02 | .77 | .32** |
| | Ended a marriage between waves | .12 | .70 | .01 | 1.10 | 1.01 | .07 |
| | Single at both waves | .22 | .59 | .04 | 1.80 | .83 | .31* |
| Childless at both waves | Parent at both waves | 2.15 | .82 | .18** | 3.96 | 1.12 | .34*** |
| | Became a parent between waves | -.37 | .46 | -.06 | .06 | .45 | .01 |
| | Granddaughter | -.53 | .35 | -.10 | -.26 | .29 | -.05 |
| | Grandchild's age | .20 | .05 | .30*** | .16 | .06 | .24** |
| | White | .10 | .34 | .01 | -.19 | .47 | -.02 |
| | Number of siblings | .14 | .09 | .06 | .03 | .12 | .01 |
| | Grandchild's education | .23 | .08 | .13** | -.04 | .11 | -.02 |
| | Parental education | -.09 | .05 | -.08† | .01 | .06 | .01 |
| | Parents married to each other | .20 | .23 | .04 | -.16 | .31 | -.03 |
| | Missing parental marital status | -.43 | .44 | -.04 | -.62 | .55 | -.07 |
| | Both paternal grandparents alive | .03 | .22 | .01 | .29 | .31 | .05 |
| | Started working full-time between waves x granddaughter | .97 | .43 | .15* | | | |
| | Parent at both waves x granddaughter | -2.01 | .96 | -.14* | -2.86 | 1.26 | -.20* |
| | Became a parent between waves x granddaughter | 1.01 | .52 | .13† | | | |
| | <i>R</i> ² | .12*** | | | .14*** | | |
| | <i>Unweighted N</i> | 691 | | | 389 | | |

Note: *B* – unstandardized beta, β – standardized beta.

† < .10. **p* < .05. ***p* < .01. ****p* < .001.

Table 4.6. Summary Table of Ordinary Least Squares Regression Findings.

| | Change in contact with maternal grandparents | Change in contact with paternal grandparents | Change in closeness to maternal grandmothers | Change in closeness to maternal grandfathers | Change in closeness to paternal grandmothers | Change in closeness to paternal grandfathers |
|---|--|--|--|--|--|--|
| Separate residence at both waves | no | yes(-) | yes(-) | no | no | no |
| Started living alone between waves | yes(-) | yes(-) | no | no | no | no |
| Enrolled in school between waves | no | no | no | no | yes(+) | no |
| Not enrolled in school at both waves | no | no | yes(+) for grandsons | no | no | no |
| Worked full-time at both waves | no | yes(+) | no | yes(-) | no | yes(-) |
| Started working full-time between waves | no | no | no | no | Yes(-) for grandsons | yes(-) |
| Worked less than full-time at least at one wave | no | no | no | no | no | no |
| Got married between waves | yes(-) | no | no | no | no | yes(+) |
| Ended a marriage between waves | yes(-) | no | yes(+) for granddaughters | yes(+) | no | no |
| Single at both waves | yes(-) | no | no | yes(+) | no | yes(+) |
| Parent at both waves | yes(+) | no | no | no | yes(+) for grandsons | yes(+) for grandsons |
| Became a parent between waves | no | no | no | yes(-) | yes(+) for granddaughters | no |

Yes – there was a statistically significant association between an independent variable and a dependent variable.

No – there was no statistically significant association between an independent variable and a dependent variable.

(+) – positive association between an independent variable and a dependent variable.

(-) – negative association between an independent variable and a dependent variable

Table 4.7. Summary of Theoretical Findings.

| | Rosow's role framework: | Intergenerational similarity hypothesis and family stress model: | Granddaughters and family roles | Grandsons and non-family roles |
|--------------------------------------|---|--|---|--|
| Changes Adult Roles | <p>H1a: acquisitions/occupation of adult roles → weaker grandparent-grandchild bond</p> <p>H1b: role exits/failures to acquire adult roles → stronger grandparent-grandchild bond</p> | <p>H2a:acquisitions/occupation of adult roles → stronger grandparent-grandchild bond</p> <p>H2b: certain role exits/failures to acquire adult roles → weaker grandparent-grandchild bond</p> | H3: The association between changes in “family” roles and changes in the grandparent-grandchild relationship is stronger for granddaughters. | H4: The association between changes in “non-family” roles and changes in the grandparent-grandchild relationship is stronger for grandsons. |
| Separate residence at both waves | <p><u>Supported H1a for:</u></p> <ul style="list-style-type: none"> • decreases in contact with paternal grandparents • decreases in closeness to maternal grandmothers | <u>No support</u> | | <u>No support</u> |
| Started living alone between waves | <p><u>Supported H1a for:</u></p> <ul style="list-style-type: none"> • decreases in contact with maternal grandparents • decreases in contact with paternal grandparents | <u>No support</u> | | <u>No support</u> |
| Enrolled in school between waves | <u>No support</u> | <p><u>Supported H2a for:</u></p> <ul style="list-style-type: none"> • increases in closeness to paternal grandmothers | | <u>No support</u> |
| Not enrolled in school at both waves | <p><u>Supported H1b for:</u></p> <ul style="list-style-type: none"> • increases in closeness to maternal grandmothers for grandsons | <u>No support</u> | | <p><u>Supported for:</u></p> <ul style="list-style-type: none"> • closeness to maternal grandmothers |

□ - not applicable.

Table 4.7. Continued.

| | Rosow's role framework: | Intergenerational similarity hypothesis and family stress model: | Granddaughters and family roles | Grandsons and non-family roles |
|---|---|--|--|---|
| Changes Adult Roles | <p>H1a: acquisitions/occupation of adult roles → weaker grandparent-grandchild bond</p> <p>H1b: role exits/failures to acquire adult roles → stronger grandparent-grandchild bond</p> | <p>H2a:acquisitions/occupation of adult roles → stronger grandparent-grandchild bond</p> <p>H2b: certain role exits/failures to acquire adult roles → weaker grandparent-grandchild bond</p> | <p>H3: The association between changes in “family” roles and changes in the grandparent-grandchild relationship is stronger for granddaughters.</p> | <p>H4: The association between changes in “non-family” roles and changes in the grandparent-grandchild relationship is stronger for grandsons.</p> |
| Worked full-time at both waves | <p><u>Supported H1a for:</u></p> <ul style="list-style-type: none"> • decreases in closeness to maternal grandfathers • decreases in closeness to paternal grandfathers | <p><u>Supported H2a for:</u></p> <ul style="list-style-type: none"> • increases in contact with paternal grandparents | | <p><u>No support</u></p> |
| Started working full-time between waves | <p><u>Supported H1a for:</u></p> <ul style="list-style-type: none"> • decreases in closeness to paternal grandmothers for grandsons • decreases in closeness to paternal grandfathers | <p><u>No support</u></p> | | <p><u>Supported for:</u></p> <ul style="list-style-type: none"> • for closeness to paternal grandmothers |
| Worked less than full-time at least at one wave | <p><u>No support</u></p> | <p><u>No support</u></p> | | <p><u>No support</u></p> |

□ - not applicable.

Table 4.7. Continued.

| | Rosow's role framework: | Intergenerational similarity hypothesis and family stress model: | Granddaughters and family roles | Grandsons and non-family roles |
|--------------------------------|--|---|--|---|
| Changes Adult Roles | <p>H1a: acquisitions/occupation of adult roles → weaker grandparent-grandchild bond</p> <p>H1b: role exits/failures to acquire adult roles → stronger grandparent-grandchild bond</p> | <p>H2a: acquisitions/occupation of adult roles → stronger grandparent-grandchild bond</p> <p>H2b: certain role exits/failures to acquire adult roles → weaker grandparent-grandchild bond</p> | <p>H3: The association between changes in “family” roles and changes in the grandparent-grandchild relationship is stronger for granddaughters.</p> | <p>H4: The association between changes in “non-family” roles and changes in the grandparent-grandchild relationship is stronger for grandsons.</p> |
| Got married between waves | <p><u>Supported H1a for:</u></p> <ul style="list-style-type: none"> decreases in contact with maternal grandparents | <p><u>Supported H2a for:</u></p> <ul style="list-style-type: none"> increases in closeness to paternal grandfathers | <p><u>No support</u></p> | |
| Ended a marriage between waves | <p><u>Supported H1b for:</u></p> <ul style="list-style-type: none"> increases in closeness to maternal grandmothers for granddaughters increases in closeness to maternal grandfathers | <p><u>Supported H2b for:</u></p> <ul style="list-style-type: none"> decreases in contact with maternal grandparents | <p><u>Supported for:</u></p> <ul style="list-style-type: none"> for closeness to maternal grandmothers | |
| Single at both waves | <p><u>Supported H1b for:</u></p> <ul style="list-style-type: none"> increases in closeness to maternal grandfathers increases in closeness to paternal grandfathers | <p><u>Supported H2b for:</u></p> <ul style="list-style-type: none"> decreases in contact with maternal grandparents | <p><u>No support</u></p> | |

☐ - not applicable.

Table 4.7. Continued.

| | Rosow's role framework: | Intergenerational similarity hypothesis and family stress model: | Granddaughters and family roles | Grandsons and non-family roles |
|-------------------------------|---|--|--|---|
| Changes Adult Roles | <p>H1a: acquisitions/occupation of adult roles → weaker grandparent-grandchild bond</p> <p>H1b: role exits/failures to acquire adult roles → stronger grandparent-grandchild bond</p> | <p>H2a:acquisitions/occupation of adult roles → stronger grandparent-grandchild bond</p> <p>H2b: certain role exits/failures to acquire adult roles → weaker grandparent-grandchild bond</p> | <p>H3: The association between changes in “family” roles and changes in the grandparent-grandchild relationship is stronger for granddaughters.</p> | <p>H4: The association between changes in “non-family” roles and changes in the grandparent-grandchild relationship is stronger for grandsons.</p> |
| Parent at both waves | <u>No support</u> | <p><u>Supported H2a for:</u></p> <ul style="list-style-type: none"> • increases in contact with maternal grandparents • increases in closeness to paternal grandmothers for grandsons • increases in closeness to paternal grandfathers for grandsons | <u>No support</u> | |
| Became a parent between waves | <p><u>Supported H1a for:</u></p> <ul style="list-style-type: none"> • decreases in closeness to maternal grandfathers | <p><u>Supported H2a for:</u></p> <ul style="list-style-type: none"> • increases in closeness to paternal grandmothers for granddaughters | <p><u>Supported for:</u></p> <ul style="list-style-type: none"> • closeness to paternal grandmothers | |

□ - not applicable.

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CHAPTER 5

CONCLUSION

The current dissertation provides a number of original contributions to our understanding of relationships between young adults and their grandparents.

Intergenerational Solidarity between Grandparents and Grandchildren

Consistent with the extant literature, young adults were found to have more frequent contact with, and to feel closer to, their maternal grandparents than to their paternal grandparents. Within lineage lines, grandchildren had closer ties with their grandmothers than with their grandfathers. There was a large change in the average contact and closeness between grandchildren and their grandparents over 7 – 10 years between Waves 2 and 3. Additionally, young adults' reports indicated that their relationships with grandparents were more likely to deteriorate than improve between waves.

Parents' Intergenerational Ties

This study documents strong evidence that each parent's intergenerational relationships matter for adult grandchildren's ties to their grandparents, at least in families where biological parents of young adults are married to each other. As hypothesized, stronger parents' intergenerational ties lead to stronger grandparent-grandchild relationships. Each parent's contact, relationships quality, and changes in relationship quality with the young adult were associated with the grandparent-grandchild bond within and across lineage lines. Evidence with respect to changes in contact with the young adult was limited to specific intergenerational ties. Changes in mother-child contact were related only to changes in closeness to maternal grandmothers, whereas

changes in father-child contact were linked only to changes in closeness to maternal grandfathers. Parents' relationships with their own parents and their parents-in-law were linked to grandchildren's closeness to the specific grandparent referenced in the parents' ties. With one exception, the same was true for changes in parents' relationships with their own parents and their parents-in-law. Changes in the mother-grandmother relationship were not related to changes in young adults' closeness to maternal grandmothers. These findings suggest that it is important to overcome the tendency to see mothers as sole kin-keepers. Fathers in married parents families can also contribute significantly to intergenerational solidarity between young adults and their grandparents. Also, longitudinal evidence suggests that the intergenerational relationships in the family move in concert and that we are not picking up solely on close or distant families.

Interestingly, the findings demonstrate that contrary to expectations, stronger parents' ties to their offspring can be also linked to weaker grandparent-grandchild bond. Put another way, not only stronger but also weaker parent-child ties may lead to stronger grandparent-grandchild interactions. For example, a stronger mother-child relationship was predictive of less frequent contact to paternal grandparents for grandsons, whereas a stronger father-child relationship was linked to less close relationships to maternal grandmothers also for grandsons. Further, improvements in the father-child contact were related to decreases in contact to maternal grandfathers for grandsons. In addition, positive changes in the mother-child relationship were associated with decreased contact to maternal grandparents for grandchildren of both genders and with decreased closeness to paternal grandmothers for grandsons. It seems that young adults may compensate for the problems with their parents by turning to their grandparents. Research is needed to

investigate the circumstances under which adult grandchildren who experience issues in their relationships with parents are likely to turn to their grandparents.

Findings of the present study on the association between parents' intergenerational relationships or changes in these relationships and the grandparent-grandchild bond demonstrate that it is important to differentiate between maternal and paternal grandparents and between grandmothers and grandfathers. This is suggested by the fact that some parents' intergenerational ties were salient for young adults' relationships with grandparents of a certain lineage and gender but not to other grandparents. Changes in relationship quality between young adults and their mothers, for instance, were predictive of changes in contact with maternal grandparents, maternal and paternal grandmothers. Taking into account lineage and the grandparent's gender can help further illuminate variations in grandchildren's relationships with grandparents.

Grandchildren's Adult Roles and Roles Changes

The findings of this study demonstrate that the associations between grandchildren's adult roles or changes in these roles and the grandparent-grandchild relationship are complex. These associations depend on the role in question, the specific dimension of intergenerational solidarity between young adults and their grandparents, on lineage, and gender. In spite of the complexity of findings, the results indicate several patterns in the linkages between grandchildren's adult roles and the grandparent-grandchild relationship. Specifically, the findings suggest that young adults who gain residential independence or work full-time are more likely to have weaker relationships with their grandparents. In contrast, grandchildren who are not married (e.g., divorced or

never married) and those who have children are more likely to have stronger relationships with their grandparents.

This study provides consistent evidence that grandchildren's residential independence is linked to less frequent contact with their grandparents, regardless of lineage. This finding can be explained by several factors: competing responsibilities related to residential independence, geographic proximity between grandchildren and grandparents, and fewer possibilities for parents to act as mediators of the grandparent-grandchild bond. Geographic distance between grandchildren and grandparents was not controlled in this research because this information is not available in the NSFH. Additional studies controlling for geographic proximity would allow a more precise interpretation of these associations.

There are lineage differences in the association between grandchildren's enrollment in school and the grandparent-grandchild bond. Enrollment in school was negatively associated with contact and closeness to maternal grandparents. In case of closeness to maternal grandfathers, it was true only for grandsons. In contrast, enrollment in school was positively related to contact with paternal grandparents for grandchildren of both genders and to closeness with paternal grandmothers for granddaughters. Additionally, compared to those who left school between waves, grandchildren who enrolled in school between waves reported increases in closeness only to their paternal grandmothers. The reason for these lineage differences in the linkages between enrollment in school and the grandparent-grandchild bond is not clear. One possible explanation for these lineage differences may be a general matrilineal bias in the grandparent-grandchild relationship. Relevant theoretical frameworks suggest that

enrollment in school may have positive as well as negative effects on the grandparent-grandchild relationship. In any event, grandchildren who are enrolled in school may have less time, energy, and opportunities for the involvement with their grandparents, regardless of lineage. However, because of the matrilineal bias in the grandparent-grandchild bond, grandchildren may evaluate changes in their relationships with grandparents differently for maternal and paternal ones. Time and energy demands associated with the student role may make grandchildren feel more “guilty” about adverse effects of school enrollment on their relationships with maternal than paternal grandparents. In contrast, positive evaluations of the student role may help enhance young adults’ relationships with paternal grandparents. Additional studies using qualitative data (e.g., in-depth interviews) may help shed light on these lineage differences. Future studies, for example, could explore the symbolic meaning of young adults’ relationships with their maternal and paternal grandparents as well as the types of support received from grandparents of different lineages when grandchildren become students.

Findings suggest that stable full-time employment as well as the transition to a full-time job lead to weaker relationships with grandparents, with one exception. Thus, full-time employment was negatively associated with contact to maternal grandparents. Further, full-time employment at both waves was linked to decreased closeness with grandfathers, regardless of lineage. Moreover, grandchildren who started working full-time between waves reported decreases in closeness to paternal grandparents. In the case of paternal grandmothers, it was true only for grandsons. However, full-time employment at both waves was linked to increased contact with paternal grandparents.

Grandchildren's marriage seems to weaken as well as strengthen the grandparent-grandchild bond. For instance, marriage at both waves was associated with increased contact with maternal grandparents over time. In addition, young adults who got married between waves experienced increases in closeness to their paternal grandfathers. At the same time, divorce between waves was related to increases in closeness to maternal grandparents. In case of maternal grandmothers, it was true only for granddaughters. Also, grandchildren who were single at both waves reported increases in closeness to grandfathers, regardless of lineage. Stable marriage or the transition to marriage may create extra opportunities for grandchildren's interactions with their grandparents. Moreover, similar experiences related to marriage may draw grandchildren's closer to their grandparents. On the other hand, unpartnered grandchildren may have more time for their relationships with grandparents. Another possibility is that divorced or single grandchildren may turn to their grandparents for emotional support or to compensate for lack of closeness/intimacy in other relationships.

Being a parent at both waves and becoming a parent between waves were positively associated with the grandparent-grandchild bond, with one exception. For example, parenthood was positively related to contact with paternal grandparents. Parenthood at both waves was associated with increased contact with maternal grandparents for grandchildren of both genders and with increased closeness to paternal grandparents for grandsons. Becoming a parent between waves was associated with increased closeness to paternal grandmothers for granddaughters. Lineage and gender differences in the findings can be explained by the possibility that grandchildren may seek relationships for their children with certain grandparents. Additionally, specific

grandparents may act to have relationships with their great grandchildren. In general, these findings suggest that grandchildren's children are likely to strengthen the grandparent-grandchild bond through similar experiences related to parental status, positive evaluations of parenthood, and additional opportunities for interactions. On the other hand, the results imply that parenthood can be also taxing on grandchildren, by limiting time and energy that they can invest in their relationships with grandparents. For instance, having a baby between waves was related to decreased closeness to maternal grandfathers for grandchildren of both genders.

Grandchild's Gender

The results provided support for the idea that the mother's intergenerational ties in the family can be more influential for granddaughter's relationships with grandparents. Very little support was found for the argument that fathers' strong intergenerational relationships are more important for grandsons than for granddaughters. In general, tests of gender interactions demonstrated that mothers' and fathers' specific intergenerational relationships are more salient for granddaughters than for grandsons. In accord with the kin-keeping perspective, these results suggest that adult granddaughters, as important family kin-keepers, are more responsive to family processes and dynamics, at least in families where young adult's biological parents are married to each other. These findings, however, also point to the need to pay more attention to men's relationships in the family. In particular, these findings imply that although the mother-daughter bond occupies a special place in families, the father's intergenerational relationships matter for his daughter's ties to grandparents as well.

The idea that young adults' gender moderates the association between grandchildren's adult roles and the grandparent-grandchild bond received limited support. Consistent with the argument that family roles have a stronger effect on granddaughters' relationships with their grandparents, a divorce as well as a birth of the first child between waves were predictive of changes in the grandparent-grandchild relationship only for granddaughters. In support of the contention that the association between changes in "non-family" roles and changes in the grandparent-grandchild bond is stronger for grandsons, enrollment in school was negatively related to closeness to maternal grandfathers only for grandsons. Additionally, the transition to full-time employment between waves and non-student status at both waves were related to changes in the grandparent-grandchild relationship only for grandsons. However, contrary to the hypothesized effects of the grandchild's gender on the association between grandchildren's adult roles and the grandparent-grandchild relationship, school enrollment was positively associated with closeness to maternal grandfathers and to paternal grandmothers only for granddaughters while parenthood at both waves was predictive of positive changes in the grandparent-grandchild relationship only for grandsons. Reasons for why some roles are more important for granddaughters' relationships with grandparents while other roles for grandsons' relationships with grandparents are unclear and require further research.

Future Research

This study points to several directions for future research in this area. Causal linkages between parents' intergenerational ties or grandchildren's adult roles and the grandparent-grandchild relationship are not clear in the current dissertation. More

specifically, because relevant measures are not available in the NSFH, this dissertation does not directly examine whether parents actively maintain kinship ties in the family and serve as role models to their children. Nor does this dissertation investigate the specific mechanisms through which grandchildren's adult roles affect grandchildren's ties to their grandparents. The results of this dissertation, however, suggest the need for future studies to address the processes by which parents may influence the grandparent-grandchild relationship and by which grandchildren's adult roles may impact the grandparent-grandchild bond.

This dissertation was able to examine the associations between parents' relationships with the grandparent and grandchild generations and the grandparent-grandchild bond only in families where biological parents of young adults were married to each. Not all the measures of intergenerational ties in the family are available in the NSFH for other groups of young adults. Research is needed to investigate these associations in other types of families. For instance, family dynamics can be different in separated, divorced, widowed, remarried or never married families.

Future studies taking into account grandparents' characteristics and geographic proximity between adult grandchildren and their grandparents would allow a more precise interpretation of the associations between parents' intergenerational ties or grandchildren's adult roles and the grandparent-grandchild bond. Future research would benefit also from considering the perspective of grandparents on their relationships with adult grandchildren. It is possible that grandparents' perceptions may be less sensitive to the effect of other intergenerational relationships in the family and grandchildren's adult roles. Compared to grandchildren, grandparents are more invested in the grandparent-

grandchild relationship and therefore, they are more likely to report higher relationships quality (Bengtson & Kuypers, 1971). In general, deeper understanding of variations in the grandparent-grandchild bond could be developed by comparing the reports from the both generations.

Research is needed to consider additional dimensions of intergenerational solidarity between adult grandchildren and their grandparents. More specifically, the previous studies in this area, including the present research, have not examined whether and how exchanges of various types of support between adult grandchildren and their grandparents are contingent on other intergenerational ties in the family and on grandchildren's adult roles. Yet, intergenerational support for older generations in the family is becoming even more important than in the past (Hareven, 1996). The current trends in social policy indicate that the state will be relying more on the family to provide assistance and care for older family members because the worldwide population aging is likely to deplete national resources allocated to health care and other types of services for the elderly (Gauthier, 2002; Putney & Bengtson, 2003). It should be also noted that due to decreases in fertility, there are fewer members within generations than between generations (George & Gold, 1991). Grandchildren, therefore, can become primary caregivers or at least, co-caregivers for the grandparent generation. Moreover, not only can grandchildren support their grandparents in times of need, but grandparents are also a resource for their grandchildren throughout the life course. For instance, grandparents can provide grandchildren with financial help, emotional support, advice and babysitting.

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