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Race, Ethnic, and Nativity Differences in Intergenerational Relationships

A dissertation submitted in partial satisfaction of the

requirements for the degree Doctor of Philosophy

in Sociology

by

Jenjira Jennie Yahirun

2012

ABSTRACT OF THE DISSERTATION

Race, Ethnic, and Nativity Differences in Intergenerational Relationships

by

Jenjira Jennie Yahirun

Doctor of Philosophy in Sociology

University of California, Los Angeles, 2012

Professor Judith A. Seltzer, Chair

International migration over the past half century has increased the racial and ethnic diversity of countries in North America and Western Europe. My dissertation highlights two ways in which intergenerational relationships can be studied in light of increasing population heterogeneity. One approach is to assess whether immigrants and their descendants adopt "mainstream" attitudes, norms and behaviors related to parent-child relationships over time. A second approach is to explore ways in which increasing population diversity changes the influence that parents and offspring have over one another and the ways in which they interact.

In my first chapter, I adopt the first approach and ask how social contexts influence immigrants' attitudes towards family obligation and in particular, the difference between attitudes of immigrants and the native born towards family support. This chapter examines nativity differences in intergenerational obligation across two social contexts: Germany and the

Netherlands. Intergenerational obligation is defined as the extent to which parents and children feel a sense of duty to assist one another and to take into account the needs and wishes of each other when making decisions. The paper focuses on first- and second-generation Turkish immigrants only and compares them to their native counterparts in Germany and the Netherlands. By comparing immigrants and their descendents from the same sending country to the "native" population of two countries, a main obstacle that commonly hinders cross-national migration research – comparing immigrants from different countries across contexts – is addressed.

I use data from the Generations and Gender Survey and apply structural equation models in the main analysis. After demonstrating consistency in the measurement and meaning of intergenerational obligation across groups, I find that immigrants have stronger family ties than natives in both countries. However, the nativity gap is much smaller in Germany compared to the Netherlands. In addition, the overall level of family obligation is lower among Turkish immigrants in the Netherlands compared to their counterparts Germany. I explain these differences from a policy perspective: More generous social welfare supports for families as well as multicultural policies that help immigrants retain their cultural identity in the Netherlands, compared to Germany, shed light on these findings. Importantly, the results suggest that attitudes towards family obligation are not fixed upon arrival; rather, they vary depending on the contexts into which immigrants settle. The findings speak to previous research that often describe differences between immigrants and natives as if immigrants' characteristics are fixed, ignoring the role that the receiving country context plays in altering immigrants' behaviors and attitudes.

My second chapter asks how increasing population diversity affects the type of partner individuals choose to marry and whether parent-child relationships influence these decisions. I

apply a linked lives approach by exploring the connection between parent-child ties and when and whom offspring marry. Parental resources and parent-child relationships are well-known factors influencing children's family formation behaviors. Parents shape when offspring marry, whether they cohabit before marriage, when they have children and the number of children they have. However, far less is known about how parent-child relationships affect who children marry. Growing population diversity and changing patterns of race/ethnic segregation provide individuals with more opportunities to meet partners of a different race/ethnic background than their own. Although recent research asserts that parental influence on children's marital behaviors is waning, parents may still influence who children choose to marry.

In this chapter, I use data from the National Longitudinal Study of Adolescent Health to investigate how parent-child relationships during adolescence affect the timing and type of marriage young adults choose. I ask whether strong parent-child relationships are more likely to lead to marriage, rather than remaining single and whether they are positively associated with entry into a same-race, rather than cross-race exogamous unions. Finally, I ask whether the association between parent-child ties and offspring's union formation vary across race/ethnic and nativity groups. The results from this chapter suggest that individuals with closer ties to the family of origin start families of their own at younger ages. Yet the effect of parent-child relationships on offspring's marital timing is moderated somewhat by the respondent's background. In addition to influencing when children marry, strong emotional support across generations tends to increase the probability of entering into a same-race union, rather than a racially exogamous union.

The third and final chapter of my dissertation examines how marriage and intermarriage in particular affects young adults' ties to parents. Family scholars today argue that modern

marriage privileges self-fulfillment and a reliance on partners to fulfill emotional and social needs that did not characterize marriage among earlier generations. An emphasis on couple quality and the time and resources needed to maintain such partnerships may have negative consequences for ties to parents.

I use data from the most recent wave of National Longitudinal Study of Adolescent Health and ask how marriage, and exogamous versus endogamous marriage in particular, are associated with ties to mothers. I also ask whether the association between offspring's union type and intergenerational ties are stronger for some groups compared to others, and whether the specific race of the partner matters. Findings from this chapter suggest that married children are not completely detached from mothers; rather, they occupy a middle ground. Married children tend to live nearby, but not close to mothers and tend to visit weekly, but not daily compared to those who are single. Who offspring marry also affects relationships with mothers. Children who married across race/ethnic lines are less likely to live near mothers compared to those who married within race/ethnic lines. Because of the geographic distance, these individuals are also less likely to visit or talk to mothers frequently compared to those who married within race/ethnic boundaries. However, the consequences of intermarriage are particularly detrimental for some groups compared to others. Hispanics, Asians and children of immigrants tended to have worse relationships with mothers following intermarriage compared to Whites and children of U.S. natives. These results highlight how intermarriage – a commonly understood mechanism that at the population level decreases the distance between groups – may in fact detrimentally affect ties among family members involved.

The dissertation of Jenjira Jennie Yahirun is approved.

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TABLE OF CONTENTS

LIST OF TABLES

ix

Chapter 3

LIST OF FIGURES

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INTRODUCTION

Background

Immigration drives much of the diversity and population growth in North America and Western Europe. Throughout much of the early 20th century, restrictionist principles dominated U.S. immigration policy. These policies inhibited migration from much of Southern and Eastern Europe, Asia and Africa. The 1965 Immigration and Nationality Act abolished these early quotas and significantly shifted the framework surrounding immigration policy. Although new quotas were developed with a more equitable distribution across countries, the Act also made previously legitimized forms of migration "illegal" when guestworker programs in Mexico were terminated, but immigrants continued to cross the U.S. border. An equally significant feature of the policy was that family reunification was given the highest priority under these new guidelines, which remain in place today. As a result of these trends, the foreign-born share of the U.S. population more than doubled over the past four decades, from 5% in 1970 to 12.5% in 2007 (Borjas 2009). First- and second- generation immigrants make up approximately 20% of the U.S population and range from countries across Asia, Africa, Latin America and Europe (Mather 2009). Throughout its history, the United States has never been as racially and ethnically diverse as it is currently.

In Europe, the latter half of the 20th century also ushered in a new era of international migration. Most countries had long histories of mass *emigration* to North and South America throughout the 19th and early 20th centuries, but few had ever received a net inflow of migrants. An unprecedented stream of international migrants began arriving in Western Europe in the 1950s with the dissolution of colonial empires and rapid economic growth. Labor shortages encouraged the recruitment of guestworkers from Southern and Eastern Europe, North Africa and Turkey. Today, the legacy of these temporary workers is well-known. Although official policies required that they return "home" after most guestworker programs officially ended in the

1970s, the majority of workers remained in the host countries. These individuals - mostly men - reunited with wives and children under family reunification policies and settled their families in the new country. Today, immigrants and their descendants constitute a substantial share of the population in countries throughout Europe, although their share varies greatly across contexts. In Germany, non-naturalized immigrants make up approximately 8% of the population (Destatis 2009).[1] Individuals with an immigrant background, regardless of citizenship status, constitute approximately 20% of the population in the Netherlands, a figure comparable to the United States (Statistics Netherlands 2010).[2]

Immigration presents a pivotal turning point in individual and family histories. As individuals, commitments to the "old country" must be renegotiated just as ties to the "new country" are formed. This process of assimilation, acculturation or integration, as it is known in varying forms, occurs in almost every facet of life. Recognizing how and whether these shifts occur is central to understanding how immigrants and their descendents become part of what some migration scholars have called "the mainstream" (Alba and Nee 2005).

Yet immigration is also fundamentally a family process. Families influence individual decisions to migrate and where they settle (Massey 1998). Once in the new country, kin help individuals integrate into the new context. Family members provide housing (Van Hook and Glick 2007), financial support (Menjivar 2000) and essential networks through which immigrants gain entry into the labor market (Waldinger and Lichter 2003).

Immigration also highlights the linked lives of family members. The linked lives perspective underscores how people in salient relationships with each other, such as parents and

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[1] In Germany, federal statistics only distinguish between foreigners (non-naturalized Germans) and Germans, the latter of whom may include individuals who are foreign born.
[2] In the Netherlands, statistics are collected based on whether individuals identify as having an immigrant background, regardless of citizenship status. This includes first- and second-generation immigrants.

children, occupy mutually influential interlocking developmental trajectories that extend throughout their lives (Elder, Johnson, and Crosnoe 2003). This perspective has traditionally been used by family scholars to understand how parent-child relationships change as a result of parents' divorce (Pezzin et al. 2008) or widowhood (McGarry and Schoeni 2000) and how children's home-leaving, marriage, divorce, and parenthood affect relationships with parents (Compton and Pollak 2011; Musick and Bumpass 2012; Sarkisian and Gerstel 2008).

It is easy to see how family members' lives change through the migration process. Migration is undertaken in part to advance family goals that affect members differently depending on who migrates and who is left behind, the roles that each family member has and the age at which they migrate. Relationships between spouses, siblings, and between parents and children are reinforced when immigration policy shapes the order of who arrives and whether family members are reunited at all. Extended and immediate family members may also remain separated by borders, although a growing number of families are engaged in transnational ties through the ease of new communication technologies (Foner and Dreby 2011). Immigration also changes norms, attitudes and behaviors related to family relationships. Wives who previously had little say at home may have greater power in the new context as they enter the workforce and in some cases, become the family's main breadwinner (Menjivar 1999; Pessar and Mahler 2003). Children born in the new country or those who arrive at younger ages may take on roles as linguistic and cultural brokers and therefore leverage power over parents (Orellana, Dorner and Pulido 2003).

Together, the assimilation and linked lives perspectives provide frameworks to understand the evolution of intergenerational relationships in diverse, multi-ethnic and multi-racial settings. When individuals cross international borders, immigrants must wrestle with

family commitments, identities and ideals that must be renegotiated in light of new environments. Individuals can respond in many ways, by shedding old attitudes, values and behaviors for new ones, by blending the old and the new together or by rejecting new ways and reifying attitudes and behaviors from the pre-migration context. What is available in the new context with respect to norms, opportunities and structures will also influence these transitions. Although previous work on immigrants' parent-child obligations, for example, has emphasized a one-way trajectory whereby immigrants shed old attitudes and behaviors and adopt the ways of the native born (Phinney et al. 2000), less work has been done to understand how contexts of the receiving country open up new ways that immigrants and their descendents think about family commitments.

Yet immigrants are not the only group to change; the foreign born change the opportunities and structures of their new environments too. By the very nature of their presence, immigrants transform the meaning and acceptability of what is mainstream (Alba and Nee 2005). In the United States, increasing diversity brought about by migration has lead to greater opportunities for contact between individuals from different race/ethnic backgrounds. This is an essential factor that contributed to the decades-long increase in intermarriage (Qian and Lichter 2011). Although early theorists argued that intermarriage was both a mechanism and an indicator of the decreasing social distance between groups (Gordon 1964), few studies have examined how intermarriage affects ties to immediate family members such as parents. Intermarriage, like any marriage, is a critical transition for parents and offspring as obligations to existing and new family members are renegotiated. Thus it is essential to understand not only how parents influence who offspring marry, but also how these unions affect offspring's contact and commitment to parents.

Dissertation Summary

My dissertation draws on these themes and broadly explores how increasing population diversity in the United States and Europe shapes intergenerational relationships.

In my first chapter, I ask how social contexts influence immigrants' attitudes towards family obligation and in particular, the difference between attitudes of immigrants and the native born towards family support. This chapter examines nativity differences in intergenerational obligation across two social contexts: Germany and the Netherlands. Intergenerational obligation is defined as the extent to which parents and children feel a sense of duty to assist one another and take into account the needs and wishes of each other when making decisions. The paper focuses on first- and second-generation Turkish immigrants only and compares them to their native counterparts in Germany and the Netherlands. By comparing immigrants and their descendents from the same sending country to the "native" population of two countries, a main obstacle that commonly hinders cross-national migration research – comparing immigrants from different countries across contexts – is addressed.

I use data from the Generations and Gender Survey and apply structural equation models in the main analysis. After demonstrating consistency in the measurement and meaning of intergenerational obligation across groups, I find that immigrants have stronger family ties than natives in both countries. However, the nativity gap is much smaller in Germany compared to the Netherlands. In addition, the overall level of family obligation is lower among Turkish immigrants in the Netherlands compared to their counterparts Germany. I explain these differences from a policy perspective: More generous social welfare supports for families as well as multicultural policies that help immigrants retain their cultural identity in the Netherlands, compared to Germany, shed light on these findings. Importantly, the results suggest that attitudes

towards family obligation are not fixed upon arrival; rather, they vary depending on the contexts into which immigrants settle. The findings speak to previous research that often describe differences between immigrants and natives as if immigrants' characteristics are fixed, ignoring the role that receiving country contexts play in altering immigrants' behaviors and attitudes.

My second chapter applies a linked lives approach by exploring the connection between parent-child ties and when and whom offspring marry. Parental resources and parent-child relationships are well-known factors influencing children's family formation behaviors. Parents shape when offspring marry, whether they cohabit before marriage, when they have children and the number of children they have (Axinn and Thornton 1992; Barber 2000; Thornton, Axinn and Xie 2007). However, far less is known about how parent-child relationships affect who children marry. Growing population diversity and changing patterns of race/ethnic segregation provide individuals with more opportunities to meet partners of a different race/ethnic background than their own. Although recent research asserts that parental influence on children's marital behaviors is waning (Rosenfeld and Kim 2005), parents may still influence who children choose to marry.

In this chapter, I use data from the National Longitudinal Study of Adolescent Health to investigate how parent-child relationships during adolescence affect the timing of marriage among young adults. I ask whether strong parent-child relationships are more likely to lead to marriage, rather than remaining single and whether they are positively associated with entry into a same-race, rather than cross-race exogamous unions. Finally, I ask whether the association between parent-child ties and offspring's union formation vary across race/ethnic and nativity groups. This chapter draws on two statistical approaches to address this set of questions. The first approach uses event history models that consider the timing of marriage and take into account

that only half of offspring married at the most recent wave of data collection because respondents are still quite young. The second approach uses log-linear models to account for differences in the likelihood of intermarriage due to variation in race/ethnic group sizes. I also employ a wide variety of indicators for parent-child relationships that include emotional support, interaction with mothers, trust in mothers and conflict with mothers. The results from this chapter suggest that individuals with closer ties to the family of origin start families of their own at younger ages. Yet the effect of parent-child relationships on offspring's marital timing is moderated somewhat by the respondent's background. In addition to influencing when children marry, strong emotional support across generations tends to increase the probability of entering into a same-race union, rather than a racially exogamous union. However, these associations are not moderated by the child's race/ethnicity, immigration status or gender.

The third and final chapter of my dissertation examines how marriage and intermarriage in particular affects young adults' ties to parents. Family scholars today argue that modern marriage privileges self-fulfillment and a reliance on partners to fulfill emotional and social needs that did not characterize marriage among earlier generations (Giddens 1992; Lesthaege 1995). An emphasis on couple quality and the time and resources needed to maintain such partnerships may have negative consequences for ties to parents. In this way, modern marriage has been characterized by some scholars as a "greedy" institution (Coser and Coser 1974).

I use data from the most recent wave of National Longitudinal Study of Adolescent Health and ask how marriage, and exogamous versus endogamous marriage in particular, are associated with ties to mothers. I also ask whether the association between offspring's union type and intergenerational ties are stronger for some groups compared to others, and whether the specific race of the partner matters. I estimate multinomial logistic regression models in the

analysis and use a number of indicators that assess structural, affective and associational solidarity between generations (Bengtson and Roberts 1991). Findings from this chapter suggest that although marriage is in fact associated with weaker ties to mothers, mothers are not entirely cut off from married offspring. Who offspring marry also affects relationships with mothers. Children who married across race/ethnic lines are less likely to live near mothers compared to those who married within race/ethnic lines. Because of the geographic distance, these individuals are also less likely to visit or talk to mothers frequently compared to those who married endogamously. However, the consequences of intermarriage are particularly detrimental for some groups compared to others. Hispanics, Asians and children of immigrants tended to have worse relationships with mothers following intermarriage compared to Whites and children of U.S. natives. These results highlight how intermarriage – a commonly understood mechanism that at the population level decreases the distance between groups – may in fact detrimentally affect ties among family members involved.

Discussion and Implications

Immigration is increasing the race, ethnic and socioeconomic heterogeneity of families across North America and Western Europe. In the United States, family scholars have long been interested in racial differences in intergenerational relationships, but recent immigration adds an extra level of complexity to this work. The three chapters of this dissertation have important implications for how race, ethnic and nativity differences between families can be studied and points to directions for future research.

The first chapter of this dissertation highlights the importance of context, but also brings up a critical issue in migration studies regarding the appropriate comparison group. The Generations and Gender survey are unique in that comparisons between the same immigrant

group (e.g., Turks) can be made across different national contexts. Thus, unlike other comparative studies, researchers are able to better assess how the same ethnic group compares to their counterparts in other countries. The comparison allows social scientists to better isolate the effects of policies and provide better recommendations for policy-makers. This is especially relevant in contexts where immigrant elderly are aging and concerns about how to care for the foreign-born elderly are debated (Lander 2007).

The second chapter also addresses an increasingly prevalent phenomenon in multi-ethnic contexts: intermarriage. As intermarriage rates have increased in the United States since the 1960s, attitudes towards intermarriage have also grown increasingly tolerant over time (Rosenfeld 2007). Still, deterrents to exogamous unions continue to exist. Parents in particular may hinder the formation of offspring's romantic relationships with partners of different racial and ethnic origins than their own. Parents may overtly discourage children's intermarriage, but the process is likely more subtle. This chapter uses two approaches to understand how parents influence children's partner choices - event history models and log linear analysis – and finds fairly consistent results. Close parent-child ties and strong family networks mean that offspring are less likely to bring partners of a different race/ethnic background into the family fold. Additional data and perhaps qualitative research are necessary to fully understand whether parents also influence other dimensions of offspring's' partner traits (e.g. education) and the mechanism through which strong family networks prevent out-marriage.

The third chapter raises an essential question of who benefits from intermarriage. There is little doubt that intermarriage and children who are born from interracial unions bring heterogeneous societies like the United States closer to a multicultural ideal. However, given the small, but significant negative findings regarding the effects of intermarriage on parent-child

10

relationships, the societal benefits of intermarriage should be questioned. This is especially true for ethnic minority and immigrant parents, who lose the most when offspring intermarry. Although these groups vary considerably with respect to their social and economic resources, recent estimates show that on average, immigrants, African Americans and Hispanics will be less equipped for the challenges of later life than their native-born White peers (Borjas 2009; Rhee 2012; Sevak and Schmidt 2007). If intermarriage disrupts the flow of support between already socially and economically poor ethnic minority/immigrant elderly and their children, then understanding whether these ties are restored over time should be a direction for future study.

Together, this project bridges the gap between two substantial sub-fields in sociology: family sociology and the sociology of immigration. Findings from each chapter shed light on topics that have important implications for the study of both areas but are also relevant for policy-makers in multi-racial and multi-ethnic contexts. By 2050, the United States will look substantially different from what it looks like today; the share of Hispanics and Asians will have grown significantly, and Whites will be a numerical minority of the country's population. Understanding how this growing diversity affects one of the fundamental institutions of social life – families – will be an essential area of future research.

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CHAPTER 1: INTERGENERATIONAL OBLIGATION:
A COMPARISON OF IMMIGRANTS AND NATIVES IN GERMANY AND THE NETHERLANDS

Introduction

Intergenerational relationships are one of the most enduring forms of human social bonds. For immigrants and their descendents, who on average possess fewer social and economic resources than their native counterparts, family members may be an essential source of social and economic support (Hao 2003). Indeed, previous research suggests that intergenerational ties are more salient among the foreign born compared to the native born and among first-generation immigrants compared to their second-generation counterparts. For example, foreign-born parents invest more time in the education of their adolescent children compared to native-born parents of similar socioeconomic backgrounds (Glick and White 2004). In later life, when individuals are the most economically and socially vulnerable, foreign-born elderly are more likely to live with adult children than their native counterparts (Burr and Mutchler 1999; McGarry and Schoeni 2000). Consistent with these behavioral differences, first-generation immigrants also report a stronger sense of family obligation than second-generation immigrants; who in turn endorse stronger obligations than natives (deValk and Schans 2008; Fuligni and Pedersen 2002; Phinney et al. 2000).[3]

Several theories help to explain why immigrants may possess stronger intergenerational relationships than natives. One common explanation is that the social and economic deprivation of immigrants encourages the development of strong family bonds that provide support during difficult times (Hao 2003; Sarkisian et al. 2007). For example, in a study comparing Mexican Americans to Whites, Sarkisian et al. (2007) found that the inclusion of respondent's income,

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[3] Natives or native counterparts refer to individuals who are native-born and for whom both parents are native-born. This group has typically been referred to as the "mainstream" in previous research (Alba and Nee 2003).

wealth and educational attainment reduced the significance of ethnicity on private transfers of financial assistance, household help, and child care.

An alternative explanation highlights potential cultural differences between immigrants and natives. That is, immigrants adhere to certain cultural norms originating in the sending country that encourage a strong sense of intergenerational obligation (Coleman and Ganong 2008; Fuligni et al. 1999; Kagitcibasi 2005; Phinney et al. 2000). Coleman and Ganong (2008), for example, found that Hispanics were more likely to endorse adult children's obligations to older parents compared to Whites. The authors attribute this to potential ethnic differences in individualistic or collectivistic tendencies. In similar studies, cultural explanations are often invoked when the inclusion of socioeconomic characteristics cannot explain the remaining statistical significance attached to immigrant/nativity status (deValk and Schans 2008) or race/ethnicity (Fuligni et al. 1999; Phinney et al. 2000).

A third explanation, and one that has received less attention in this debate, is that the social and institutional contexts into which immigrants integrate influence the gap between immigrants and natives and across immigrant generations. The idea that immigrants adapt to the social contexts of their new home is certainly not novel. Studies based on outcomes related to the socioeconomic and cultural integration of immigrants stress the importance of considering both local and national contexts that shape immigrant behaviors and attitudes (Crul and Vermuelen 2006; Kesler 2006; Koopmans 2010). However, previous research on nativity differences in attitudes towards family obligation often invokes immigrants' cultural differences as fixed entities.

Although it cannot be disputed that immigrants arrive with a set of cultural attitudes, this paper argues that the country of settlement may also have a significant role in re-shaping those

dispositions. This study examines nativity and immigrant generational differences in intergenerational obligation across two seemingly similar social contexts: Germany and the Netherlands. From a global perspective, it is easy to gloss over the differences between Germany and the Netherlands. Both nations adhere to Western liberal norms and attitudes about the family in place since the second demographic transition (Van der Kaa 1987). However, a closer examination reveals that the two contexts differ significantly with respect to who is responsible for the most vulnerable members of society: young children and the elderly. Research has clearly documented the historically limited availability of childcare in (West) Germany where women were (and many would argue, still are) primarily responsible for the upbringing of young children (Hank and Kreyenfeld 2000). By the same token, a family-centered approach to elder care is also pervasive in Germany, where kin are legally obligated to care for the elderly. For example, family members are responsible for paying a patient's medical care costs when elderly kin lack such means (Suanet et al. 2011). These norms clearly distinguish Germany from the Netherlands, where families carry no legal obligation towards their elderly kin.

In this paper, intergenerational obligation is defined as the extent to which parents and children feel a sense of duty to assist one another and to take into account the needs and wishes of each other when making decisions. Because much of the past research on nativity differences in adult parent-child relationships focuses on behavioral outcomes and treats attitudinal differences as part of the residual (Burr and Mutchler 1999; McGarry and Schoeni 2000; Wilmoth 1998), I instead measure attitudinal differences directly. Behavioral outcomes are an important component of assessing intergenerational relationships, but are likely to reflect both resource opportunities and constraints. For immigrants, this is particularly problematic given that instrumental assistance to parents and children is likely constrained by geographic distance and

national borders. Focusing on attitudes, therefore, may provide a better assessment of the normative orientations of individuals and the groups to which they belong.

Research comparing immigrants in different receiving contexts is often impeded by the national origin and ethnic heterogeneity of immigrants (Alba 2005). To address this issue, this paper focuses on first- and second-generation Turkish immigrants as the only immigrant group and compares them to their native counterparts in Germany and the Netherlands. Today, Turks represent the largest non-naturalized immigrant group in Germany, the Netherlands and across Western Europe (Destatis 2007; Eurostat 2010; Statistic Netherlands 2010). By comparing immigrants and their descendents from the same sending country to the native "mainstream" population of two countries, I partially control for selection effects that frequently hinder cross-national migration research. In addition, I highlight significant variation in what is considered the "mainstream."

This study has two main research goals. First, I ask whether attitudes towards intergenerational obligation differ by immigrant status and whether attitudes towards intergenerational obligation also vary across national contexts. Traditional assimilation and acculturation theories (Gordon 1964) suggest that first-generation immigrants will differ most from natives, with second-generation immigrants falling somewhere in between. In addition, previous research suggests that norms regarding care towards older parents may be stronger in Germany compared to the Netherlands (Kalmijn and Saraceno 2008). Do these differences also persist once demographic and economic traits of individuals are accounted for?

Second, I ask how social context – measured broadly by country of residence –affects the relationship between immigrant generation and intergenerational obligation. In a sense, this

question asks whether there is "universality" in the attitudes of first and second-generation immigrants towards their families, regardless of where they settle.

Background

Nativity and Immigrant Generational Differences in Intergenerational Obligation

Immigrants, especially first-generation immigrants, possess stronger intergenerational relationships than natives throughout the life course. Fuligni et al. (1999) found that among adolescents, first-generation immigrant youth placed more importance on future support to the family than children of native parents. Studies from Western Europe also confirm that children who are themselves foreign born endorse higher levels of intergenerational obligation than the second generation (Phinney and Vedder 2006). In addition, foreign-born children with longer periods of residence in the host country express weaker support for intergenerational obligations than those who have lived in the country for shorter durations. All of these findings suggest an acculturation effect; that is, with time and over generations, immigrants acculturate to 'mainstream' norms about the family.

In later life, research consistently demonstrates that foreign-born elderly are more likely to live with adult children than native-born elderly (Burr and Mutchler 1999; McGarry and Schoeni 2000; Wilmoth 1998). In particular, immigrants who arrive in later life may be more likely to live with adult children in part because their migration is tied to provisions of grandchild care (Mazumdar and Treas 2004). In addition, the determinants of providing support also differ for middle-age foreign-born individuals compared to their native-born counterparts. In one study, Hao (2003) found that education, earnings and wealth were not associated with providing assistance to friends and family in immigrant families, but were associated with the

provision of support in native families. One implication of this is that immigrants' support of family members is not tied to their own socioeconomic resources.

Although previous research documents the positive effects of foreign-born status on intergenerational relationships, as well as the potential negative effects of acculturation with respect to intergenerational obligation, we know little about whether nativity and generational differences are consistent and comparable across social contexts. However, several studies show substantial variation in the average level of kinship support available to individuals across countries. Attitudes of who is responsible for elder family members varies substantially across national contexts (Daatland and Lowenstein 2005; Daatland et al. 2010). Within Europe, Kalmijn and Saraceno (2008) found that individuals in Southern Europe (e.g., Spain, Italy, and Greece) responded more strongly to the needs of sick, less-educated older parents than their Northern European (e.g., Netherlands, Denmark, and Sweden) counterparts. With respect to behavior, elderly parents in North America and Western Europe tend to provide more financial support to offspring than they receive from them (Albertini et al. 2007). Yet in many other parts of the world from which immigrants originate, intergenerational transfers tend to flow in the opposite direction from adult children to parents (Frankenburg, Lillard and Willis 2002; Nauck 2002; Wong and Higgins 2007).

Whether these differences indeed reflect broader cultural norms or are due to differences in institutional support or both remains unsettled. In fact, cultural ideas about filial obligation may be reinforced in contexts where parents have little to no access to public resources. Either way, findings from cross-national research clearly suggest contextual differences related to family obligations.

Two National Contexts: the Netherlands and Germany

In this paper, I compare the social contexts of the Netherlands and Germany. Although the countries are similar in many ways, they differ markedly with respect to policies aimed at immigrant incorporation and public care for older individuals and young children. To begin with similarities, both countries experienced unprecedented, widespread international migration following World War II. During the 1950s and 1960s, rapid economic growth in Germany and the Netherlands encouraged the large scale recruitment of guestworkers from Southern Europe, Eastern Europe and Turkey. Turkish guestworkers made up the largest share of temporary labor migrants to Germany and were one of the two largest labor migrant groups in the Netherlands (where Moroccans also arrived as guestworkers). Most guestworkers were recruited via the Turkish Employment Service and sent abroad based on the needs of the host country and the skills of migrants. Semi-skilled and unskilled workers were recruited to work in the iron and metal production and processing industries in Germany in the Netherlands. Therefore, Turkish guestworkers found themselves in similar occupational niches in both countries (Akgündüz 2008: 111-2). In addition, because the majority of guestworkers emigrated from Anatolia, the eastern part of Turkey that was rapidly undergoing industrial reforms during this period, immigrants across borders tended to share cultural similarities. Nauck (2002) discusses parental influence on children's partner choices, expectations of multi-generational coresidence and strong patriarchal traditions as a few of the family norms that Turks brought with them as they settled in Western Europe. Such practices, however, were not simply carried over from Turkey to the receiving context. His research suggests that the intergenerational transmission of values is emphasized more in migrant families than families that remain behind in the country of origin because of parents' desire to reinforce Turkish family values while abroad (Nauck 1994).

Until the official labor recruitment of guestworkers ended in the early 1970s, policies aimed at incorporating foreign workers into the broader social milieu were almost non-existent. However, the end of guestworker recruitment prompted both countries to address the issue of non-return. In the Netherlands, a "multicultural" approach to immigrant incorporation guaranteed that almost all immigrants were eligible for naturalization, long-term residence, anti-discrimination legislation, family reunification, legal employment and political participation. In addition, the multicultural approach granted immigrants the right to live within their cultures of origin by forming state-funded ethnic and religious organizations and institutions (e.g., Turkish-language schools, radio stations, etc.). Germany, on the other hand, adopted an "integrative" approach, whereby high barriers to becoming a citizen permitted only the most assimilated and acculturated to naturalize. For example, citizenship eligibility was (and still is) tied to labor market performance, an absence of social service use and a lack of criminal records. Historically, German citizenship was restricted to ethnic Germans *(Aussielder)* until 1993, when blood-citizenship (*jus sanguinis*) laws were relaxed.[4] In addition, the German model grants immigrants less access to social services until naturalization, compared to the Netherlands. Finally, the integrative model leaves little to no room for the expression of group-level cultural differences and the endorsement of such differences is not sanctioned by the state (Koopmans 2010). Given these distinct approaches to immigrant incorporation, it is not surprising that Turkish immigrants in Germany have naturalized at much lower rates than those in the Netherlands (Muus 2003: 28-29).

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[4] In 1993, immigrants who were educated in Germany and had lived there for at least 8 years, as well as those who had lived in Germany for 15 years and were deemed financially capable of supporting themselves, were allowed to apply for citizenship. In 2000, naturalization law was again reformed; children born to foreign-born immigrants are now granted automatic German citizenship, so long as one parent is a permanent resident and has lived in Germany for the past eight years.

Although the official recruitment of guest workers from Turkey stopped after the 1973 oil crisis, family reunification to both countries continued. In the Netherlands, the law remained quite liberal and only has grown more restrictive in recent years. On the other hand, family reunification to Germany was originally much more restrictive. German policies were implemented to lower the maximum age at which children could join their parents. Similarly, changes were made such that sponsored spouses had to wait four years after their arrival to receive work permits; adult children also had to wait at least two years to begin working. Combined, these policies sent a clear message that family reunification to Germany was discouraged. In addition, Germany pursued incentivized repatriation policies in the early 1980s in hopes of ameliorating a high unemployment problem. Approximately 200,000 Turkish immigrants returned in 1984 alone (Euwals et al. 2009). Thus, although the Turkish-origin population in Germany was and still is much larger than the Turkish-origin population in the Netherlands, the Turkish community in the Netherlands grew at a much faster pace than in Germany (Muus 2003).

In recent years, scholars have pointed to a backlash against multicultural politics, particularly when coupled with an inclusive social welfare policy (Koopmans 2010). In countries with generous governmental support and multicultural policies in place (i.e., the Netherlands), there is evidence of weaker labor force participation among first-generation immigrants compared to countries with limited welfare regimes and no multicultural policies (i.e., Germany) (Koopmans 2010). Other scholars, however, contend that integration policies are far less influential on the socioeconomic assimilation of immigrants compared to institutional differences in the organization of labor markets and higher education. Drawing on data from across Europe, Muus (2003) and Kesler (2006) find that multicultural polices have little effect on immigrant

unemployment rates; rather, destination country labor market regulations are the most important factoring influencing immigrant employment.

Although there is mixed evidence as to whether multicultural and integration policies influence socioeconomic outcomes, these policies may still significantly influence immigrants' normative orientations (Muus 2003). Comparing Turkish adolescents across four national contexts, Vedder et al. (2006) found significant differences in immigrant youths' reported levels of ethnic orientation and endorsements of intergenerational obligation. Ersanilli and Koopmans (2007) also found that the social identities of first and second-generation Turkish youth depend on the country of settlement. Specifically, Dutch and French Turks are more likely to identify with the host country nationality than German Turks. German Turks, on the other hand, are more likely to identify as Turkish than their counterparts living in the Netherlands. This finding is at odds with recent critiques of multicultural politics, which suggest that immigrants in integrative societies – such as Germany - should exhibit greater tendencies towards acculturation than those in multicultural contexts.

In addition to differences in policies targeted at immigrant incorporation, public support for the elderly and young children also varies substantially between the two countries. Pension scheme benefits in Germany are proportionate to contributions made into the system. In this context, short contribution periods and low incomes could lead to poverty for many older immigrants. Dutch pensions by comparison are not based on income contributions but are instead based on periods of residency. Every person who resides within the Netherlands for at least 50 years is guaranteed a flat-fee pension above the minimum welfare level; a deduction of 2% each year is made for those who have not met the 50-year requirement. In principle, the Dutch program discriminates against immigrants, but it is more effective at minimizing poverty among

all elderly compared to Germany (Dörr and Faist 1997). Finally, the two countries also differ in the availability of formal care services for sick elderly. Home-based care and long term care are much more widely available in the Netherlands compared to Germany. In addition, elderly who cannot afford to pay for health services are compensated by the Dutch state; whereas family members are responsible for paying for a patient's medical care in Germany (Suanet et al. 2011).

Research Questions

This paper addresses two main research questions in light of the substantial variation in intergenerational obligation across immigrant generations and the considerable disparity across national contexts. First, does intergenerational obligation differ between immigrants and natives and across countries? Do these differences remain once socioeconomic traits are accounted for? Second, does the relationship between immigrant status and intergenerational obligation depend on the country in which immigrants settle? In essence, is there a universal immigrant "effect" on intergenerational obligation, or does social context also shape how immigrants think about their kinship responsibilities?

Data

I use data from the first wave of the Generations and Gender Survey (GGS) and supplement the data with immigrant-specific surveys: the Turkish-German Generations and Gender Migrant Survey and the Dutch Social Position and Use of Welfare Provisions by Migrants survey. In the GSS, approximately 10,000 adults were interviewed in Germany in 2005 and approximately 8,000 adults were interviewed in the Netherlands between 2002 and 2004. For these "core" samples, only interviews in German or Dutch, respectively, were conducted. Respondents who were not fluent in German or Dutch were deemed ineligible to participate (Dykstra et al. 2005). In both countries, supplemental surveys were taken of the immigrant

27

population. In Germany, the supplemental survey included approximately 4,000 Turkish immigrants and their descendents in 2006. Sampling methods were based on nationality and place of residence, with population registries used to access individuals with Turkish nationality in all regions of the country. All surveys were conducted in person, either in German or Turkish. In the Netherlands, the supplemental Dutch survey targeted four main ethnic groups in the Netherlands and samples were drawn from 13 Dutch cities in which 50 percent of the migrants from these groups reside. [5] In the Netherlands, this captures a substantial majority of the Turkish population given heavy Turkish concentrations in large cities in the Western part of the country (Vermeulen and Penninx 2000). Approximately 370 interviews with adults of Turkish background were completed between 2002 and 2003. All interviews followed a structured questionnaire in Dutch that was available in Turkish as well. The data are well-suited for this study because the GGS and the supplemental immigrant surveys ask comparable questions with considerable thematic overlap, thus encouraging cross-national research on families (Vikat et al. 2007). When combined together, these data provide a large sample of adult first- and second-generation Turkish immigrants and natives in Germany and the Netherlands. Immigrants from other countries are omitted from the analytical sample.

Measures

The main outcome variable of interest in this study is the latent construct of intergenerational obligation. This construct is based on three attitude indicators assessing the normative obligations of parents and children toward one another. In all of the surveys, respondents were asked the extent to which they agreed with the following statements: 1)

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[5] The SPVA-survey was carried out in the following 13 municipalities: Amsterdam, Den Haag, Rotterdam, Utrecht, Eindhoven, Enschede, Almere, Alphen aan de Rijn, Bergen op Zoom, Hoogezand-Sappemeer, Delft, Dordrecht and Tiel.

Grandparents should care for grandchildren when parents cannot[6], 2) Parents should help their grown children when children are having financial problems and 3) Children should live with parents when parents can no longer care for themselves. Answers ranged from "strongly agree" to "strongly disagree" along a five-point Likert scale ranging from 0 to 4.

The two main explanatory variables of interest in this study are the respondent's immigrant generational status and the respondent's country of residence. Immigrant generational status is defined in the following way: first-generation immigrants are respondents who were born in Turkey; second-generation immigrants are those who were born in Germany or the Netherlands with at least one biological parent who was born in Turkey; natives are defined as those who were born in Germany or the Netherlands and for whom both biological parents were born in Germany/the Netherlands respectively. Respondents' country of residence is coded dichotomously, with the Netherlands receiving a value of 1 and Germany a value of 0. In addition to the main predictors, demographic variables are also incorporated into the model as controls. These include sex, age, educational attainment, employment status, marital status and whether or not the respondent is the parent of a resident child (age 17 or younger) at the time of survey.[7] All variables are treated as categorical with the exception of age, which is continuous. Although sample weights are provided with each survey, no weights exist to make the

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[6] There are two ways to thinks about grandchild care. Grandparents may provide grandchild care because improving the grandchild's welfare is the main goal. On the other hand, grandparents may provide grandchildren with care as a way to support adult children. In reality, it is likely these two motivations are inextricably linked. In this analysis, I refer to grandchild care as a transfer from the hypothetical individual to his/her adult offspring, but recognize that this assumption may not capture all the motivations at hand.

[7] Ideally, I would also like to include an indicator for the respondent's language of interview. However, it does not appear to be available the German or Dutch migrant data (I am corresponding with the coordinators of the survey to verify this). If it is unavailable, I plan to include an indicator for the original sample (e.g., GGS, Turkish-German GGS, etc) that respondents belonged to in a revision of this draft.

combination of immigrant and national surveys representative of the German and Dutch populations, respectively. Thus, I do not use weights in this analysis.

Methods

This study employs a structural equation framework to examine how immigrant generational status and country of residence affect intergenerational obligation. Stata 10.0 is used to prepare the data and to provide descriptive characteristics. LISREL 8.80 is used for the remaining analysis. Given that the majority of the variables used here are categorical; polychoric correlation matrices and asymptotic covariance matrices are generated from the raw data to estimate the models (Jöreskog 1990).

The analysis consists of three steps. First, to address my research question of whether intergenerational obligation varies within and across countries, I compare mean averages across different indicators by the respondent's immigrant status and country of residence. Next, I compare a series of Multiple Indicator and Multiple Cause (MIMIC) models to control for demographic traits. Using the pooled two-country sample, the first model includes immigrant generation status as the main predictor; the second model adds in country of residence and the third model adds in demographic characteristics. I examine whether the inclusion of demographic traits reduces the effect of immigrant status and country of origin for the full sample.

Third, I ask whether the relationship between immigrant generation and intergenerational obligation depends on the country in which immigrants settle. I use multiple-sample structural equation modeling to formally test for differences in the path coefficients between countries. I do this by first stratifying the sample and freely estimating the path coefficients for all variables in

each country. I then constrain path coefficients for immigrant generation and other socioeconomic traits to be equal across countries and test for an improvement in model fit.

Analytical Sample

The analytical sample includes 3,407 first-generation Turkish immigrants, 1,038 second-generation Turkish immigrants and 14,108 native respondents. I imputed the mean value for respondents missing on age, sex, education, employment status, marital status and parental status (less than 5% of sample). Descriptive statistics of the sample are presented in Table 1-1. In both the Dutch and German samples, natives constitute the majority, with the number of first- and second-generation Turks in the Netherlands constituting a much smaller share (6.2%) in comparison to Germany (34.5%). These figures reflect the fact that the German supplemental survey included only individuals of Turkish descent and had a much larger sample compared to the supplemental Dutch survey. These figures are not at all reflective of the share of the population of Turkish immigrants in Germany and the Netherlands. In Germany, recent estimates suggest that Turkish immigrants and those of Turkish origin make up approximately 3.9% to 4.1% of the population, or 3.2 to 3.4 million individuals (Abalı 2009). In the Netherlands, 392,329 first and second-generation Turkish immigrants make up 2.3% of the population (Statistics Netherlands 2012).

INSERT TABLE 1-1 HERE

In addition to the small number of second-generation Turks represented in the Dutch sample compared to the German sample, the ratio of first- to second- generation Turks is also much larger in the Dutch sample. This illustrates both differences in data collection methods across the surveys and also the challenges of collecting information on the second generation more broadly. Because norms of coresidence are high among immigrant populations, sampling

one adult member of the household, if not done randomly, will usually lead to the elder, first-generation household member being interviewed. Either way, the small sample sizes of second generation Turks in the Dutch sample urges cautions when interpreting these findings.

The average age across the samples is approximately the same (~45/46) where survey respondents range in age from 18 to 81. Similarly in both country samples, the majority of respondents are married although the percentage of those who are parents of minor children is larger in the Netherlands (34.1%) compared to Germany (24.9%). In both samples, the majority reported having a secondary degree as their highest form of educational attainment. Finally, the majority of respondents in the Dutch sample are currently part- or full-time employed at 62.7%, whereas a smaller share is employed in the German sample at 48.5%.

Results

Before I begin the analysis, I first confirm that constructs of intergenerational obligation are in fact comparable across groups and countries of residence. Many studies on nativity differences in parent-child relationships rely on respondent's attitudes (Daatland and Lowenstein 2005; Daatland et al. 2010; deValk and Schans 2008; Fuligni et al. 1999; Phinney and Vedder 2006). Yet a critique of previous research is the lack of attention paid to the consistency in meaning and association of indicators across different groups (Arily and Davidov 2009).[8] Metric invariance refers to the idea that observed indicators of the latent variable (in this case, family obligation) should measure the same properties across groups. Before beginning the analysis, I explicitly tested for metric invariance and find that factor loadings and error variances do not vary substantially across first- and second-generation immigrants and natives or across

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[8] In fact, this problem plagues attitude research in some disciplines (e.g., Sociology, Political Science) more so than others (e.g. Education, Psychology, Organizational research) (Arily and Davidov 2009).

individuals residing in the Netherlands or Germany (see Appendix Table 1-1). In the first row of Appendix Table1-1, weak and strong tests of metric invariance between groups are assessed. The results indicate that factor loadings and error variances in the measurement model do not vary substantially across first- and second-generation immigrants and natives. That is, constraining these three groups to have the same factor loadings for grandparents' role, parents' role and children's role indicates a close model fit at RMSEA=.047. A strong test of metric invariance, which in addition tests for group-level variation in the unique error variance of grandparents' roles, parents' roles and children's roles indicates an even closer fit at RMSEA=.029. Results for tests for other comparison groups are presented in rows 2 through 5. That is, constructs of intergenerational obligation are in fact comparable across groups and countries of residence.

Research Question 1: Does intergenerational obligation differ between immigrants and natives and across countries?

In Table 1-2, results from Wald tests assessing differences in attitudes towards intergenerational obligation are presented. In the top panel where only the German sample is analyzed, clear differences emerge across groups. As anticipated from previous research, first-generation Turks have the strongest endorsement of intergenerational obligation and natives have the lowest; second-generation Turks fall somewhere in between. Wald tests indicate significant differences in the distribution of Likert scores for these groups (p=.000 for all items). In addition, first-generation immigrants are more likely to endorse grandparents' obligation to provide care to grandchildren and parents' role to support adult children than second-generation immigrants.

INSERT TABLE 1-2 HERE

Next, the lower panel of Table 1-2 presents results from the Netherlands, which in general parallel results from Germany. Here too, first-generation Turks possess the highest sense

33

of intergenerational obligation and natives display the weakest. Again, Wald tests show significant differences in the distribution of attitudes between immigrants and natives (p=.000 for all items). In addition, there are clear differences between first-and second-generation Turks across all items used to assess family obligation, unlike Germany.

Finally, across all immigrant generations in the Netherlands, the mean scores of each item are consistently lower compared to their counterparts in Germany. Additional tests (not shown here) confirm that the difference between countries is significant for almost all comparisons. First-generation Turks in the Netherlands have on average lower levels of endorsement of grandparents' roles (2.24) than first-generation Turks in Germany (3.12); the same holds true for adult children's roles (2.72 compared to 3.09). In addition, second-generation Turks and natives in the Netherlands also have lower average endorsements of family obligation than their German counterparts, with all comparisons showing statistical significance. The only comparison that is not significant is the comparison between first-generation Turks in Germany and the Netherlands with respect to parent's responsibility towards adult children. In this case, the means are not significantly different from one another.

The second part of the analysis fits a series of MIMIC models to the combined Dutch and German samples and controls for demographic traits. I use polychoric correlation matrices and asymptotic covariance matrices for all models due to the categorical nature of the variables (with the exception of age). In addition, I estimate all models using maximum likelihood.[9] I fix elements of the Phi matrix (co-variance between the predictor variables) to be equal to the observed variances and covariances of the predictor variables and all other path coefficients in

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[9] The estimates do not vary greatly when other estimation procedures were used, such as diagonally least squares. I use maximum likelihood because fit statistics from this procedure are used to assess improvements in model fit (Bryant and Satorra, 2011)

the models are freely estimated, both in the structural and measurement sides of the model. The only other parameter that is fixed is the path from intergenerational obligation to children's roles. This parameter is assigned a value of 1 to properly identify the model.[10] A comparison of estimates from the models is presented in Table 1-3 and a corresponding path diagram is presented in Figure 1-1.

<center>INSERT TABLE 1-3 HERE</center>

In the first model in Table 1-3, the path coefficient for immigrant status (γ_{11}) is equal to -.580 (p<.001). With each increasing immigrant generation, intergenerational obligation decreases by approximately .580 units according to the unstandardized path coefficient. Simply put, first generation immigrants endorse higher levels of obligation than their native counterparts. The direction of this coefficient is in line with what is observed in the descriptive statistics and broadly in line with what we would expect from an acculturation perspective. Model 1, however, produces an unacceptable fit to the data at RMSEA=.159. In Model 2, the inclusion of country of residence significantly reduces the effect of immigrant status on intergenerational obligation. Here, each increasing generation decreases predicted levels of intergenerational obligation by approximately .214 units. In addition, country of residence is strongly correlated with the latent variable. Individuals living in the Netherlands scored on average .50 points lower on intergenerational obligation than those living in Germany. Finally, Model 3 includes the remaining covariates. The magnitude of the coefficient for immigrant status increases to -.365 from -.214 in Model 2 net of other variables in the model; indicating that with each increasing immigrant generation, the norm of family obligation is weakened. Country of residence remains

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[10] Substantive results do not change if other lamda parameters (parents' role, grandparents' role) are assigned the value of 1.

<center>35</center>

significant, but the effect is diminished somewhat by the inclusion of other individual demographic traits. Although almost all other variables in the model are statistically significant (with the exception of education and employment), the path coefficients are smaller in magnitude, suggesting a weaker effect of other demographic traits on intergenerational obligation. Factor loadings are in general quite high, with all factors loading at or above .85. Overall, the general fit is greatly improved at RMSEA=.037. To explicitly compare the two models, I conduct a Satorra-Bentler scaled chi-squared difference test, which accounts for non-normal data in a structural equation framework (Bryant and Satorra, 2011). A Satorra-Bentler scaled chi-squared difference test where χ^2=167.4 and 12 (16-4) degrees of freedom provides a *p*-value=.000. This indicates a significant improvement of fit in Model 3 compared to Model 2.

Research Question 2: Does the relationship between immigrant status and intergenerational obligation depend on where immigrants settle? To answer my second research question, I use multiple-sample analysis to assess whether the relationship between immigrant status and intergenerational obligation depends on where respondents live.[11] I present the results in Table 1-4 and a corresponding path diagram is presented in Figure 1-2. Essentially, I begin by dividing the sample into those respondents residing in the Netherlands from those respondents living in Germany (i.e., two samples). I estimate a model in which all parameters in the measurement model are constrained to be equal across contexts; however I allow each of the path coefficients from the variables of interest (immigrant status, gender, age, marital status, parenthood, educational attainment, and labor force status) to the latent construct to vary freely. In the first set of columns, I present results from Model 1. In general, the direction of the path coefficients is similar across most variables, with the exception of parenthood. With respect to

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[11] I use general guidelines provided by Lomax for multiple samples, which includes samples of two or more (1983).

immigrant status; the effect appears to be weaker in Germany (γ_{11}=-0.716), compared to the Netherlands (γ_{11}=-1.226). Sex and age are positively correlated with attitudes towards intergenerational obligation in both contexts. In general, being married is associated with a weaker sense of intergenerational obligation than not being married; however, the same cannot be said for parenthood. In Germany, living with a child increases respondent's commitments to the family; but in the Netherlands, the opposite effect is found, all else held equal. Finally, in both settings, those who are highly educated tend to endorse stronger norms of family obligation than those who are less educated. Employment status is not associated with obligations in Germany, but is positively association with family obligation in the Netherlands. In general, the model fit to the data at RMSEA=.035, which indicates that the model fits the data well.

INSERT TABLE 1-4 HERE

In Model 2, almost all path coefficients are constrained to be equal across countries, except immigrant status, which is the main variable of interest. In Model 3, immigrant status is also constrained to be equal across contexts. RMSEA values suggest a similarly good fit for the data in Models 2 and 3 (RMSEA=.035) compared to Model 1 (RMSEA=.035). To better assess whether there is an improvement in model fit, a Satorra-Bentler scaled chi-squared difference test is used to compare the models. In a comparison of Model 2 and Model 3, χ^2=7.56 and 1 (41-40) degree of freedom provides a *p*-value of .0058, suggesting that the models are significantly different from one another, and in this case, that the fit of the model is not improved with the additional equality constraints. Model 2 is thus preferable, even though Model 3 is more parsimonious. A comparison of Model 1 and 2 provide similar results, suggesting that the model fit is hindered by the introduction of the additional constraints (χ^2=296.9, d.f=6, *p*-value=.000). We therefore prefer Model 1, even though Model 2 is more parsimonious.

Hence, Model 1, where path coefficients between the independent variables of interest are freely estimated for each country, provides the best fit to the data. Thus the relationship between immigrant status and intergenerational obligation varies by national context and the effect of immigrant status is significantly weaker in Germany compared to the Netherlands. Earlier analysis of these data using ordinary least squares regression (not shown here) finds that country of residence moderates the association between immigrant status and family obligation, paralleling results from the multiple sample analysis presented above.

Discussion

Findings from this paper have important implications for understanding nativity differences in intergenerational relationships. First, the results confirm the significance of immigrant generation on intergenerational obligation. Results from the descriptive statistics and the MIMIC models suggest that family obligation tends to weaken across immigrant generations; first-generation immigrants have higher levels of intergenerational obligation than second-generation immigrants, who in turn endorse higher levels of obligation than natives. These findings are consistent with previous research on generational differences that were typically limited to adolescents (Fuligni et al. 1999; Phinney and Vedder 2006; Vedder et al. 2006); and extend these findings to adults as well. In addition, the results also extend current knowledge about immigrant generational differences to contexts beyond the United States.

Second, respondents living in the Netherlands report a weaker sense of family obligation than those living in Germany. From the descriptive means, it is clear that for both immigrants and natives, living in the Netherlands reduce a sense of obligation to the family compared to residing in Germany. This country of residence effect remains significant even after controlling

for common factors that are known to shape attitudes towards intergenerational obligation such as gender, age, marital and parental status, education and employment status.

Third, the results suggest that where immigrants settle is strongly related to norms of intergenerational obligation. A comparison of between-country differences is particularly illuminating, especially given recent critiques of multicultural policies. According to some, multicultural policies not only impede the economic assimilation of immigrants and their descendents, but also encourage the retention of cultural identities, which discourages the formation of unified national values (Koopmans 2010). In fact, results from this study suggest that the normative divide between immigrants and natives, at least with respect to attitudes towards the family, is also greater in the Netherlands, with its long history of multicultural politics, than in Germany, where historically there was little to no recognition of group cultural differences. These results highlight the possibility that multicultural policies may have proven less effective at culturally incorporating immigrants into the mainstream in the long run, compared to policies that left little to no room for the expression of group differences.

Thus far, I have hinted that differences in immigrant integration policies are central to explaining the much stronger effect of immigrant generation on attitudes towards family obligation in the Netherlands, compared to Germany. However, cross-national differences in levels of support for families also play a role in explaining overall trends. Although the gap between immigrants and natives is much larger in the Netherlands compared to Germany, overall levels of support are much lower for all respondents, immigrants included, in the Netherlands compared to Germany. One reason may be that the greater public provision of elder care in the Netherlands lowers residents' sense of responsibilities to their kin. Public support for the elderly and children in Germany, by contrast, is not as generous. This in part may explain the stronger

sense of family reliance among immigrants and natives in Germany, compared to the Netherlands.

In addition, cross-national differences in return migration may partially explain some of the results observed here. In Germany, repatriation policies may have selected those immigrants who were especially close to their families to return to the country of origin. If that is the case, then the observed difference in levels of family obligation among those who remained in Germany would be lower than those who left, and thus more similar to native Germans. Indeed, this is borne out in the results presented here, where the nativity gap in family obligation is smaller in Germany compared to the Netherlands.

One limitation of this paper is that the exact mechanisms through which social contexts affect norms regarding intergenerational obligation remain unobserved. Although the ability to disentangle these multiple mechanisms is beyond the scope of this paper, it is possible that immigrant integration policies, differential availably of public benefits and selective return migration explain at least some of the variation in the effect of immigrant status across contexts. Second, the small sample of second-generation Turks in the Netherlands should urge caution when making inferences about this population. Third, I cannot explicitly control for differences in the selection of Turkish immigrants to Germany and the Netherlands. Previous research that attempts to control for the selection of Turks from different regions to countries within Europe frequently limits the sample to those who emigrated from rural regions (Ersanilli and Koopmans 2007). Such analyses attempt to control for the substantial ethnic, religious and educational differences across Turkey. However, this paper cannot control for specific sending regions within Turkey because information from the GGS and the supplemental surveys do not include this. Yet there is reason to believe that in general, Germany received a larger share of Turks from

more urbanized, Western parts of Turkey, when compared to other countries (Ersanilli and Koopmans 2007). If this is true, then selection effects would predict a smaller gap in the normative orientations between immigrants and natives in Germany (where Turks are allegedly more well-educated and cosmopolitan) compared to the Netherlands. In fact, this prediction is supported by the results found in this paper. On the other hand, this selective immigration stream of elite, urban Turks would also predict lower average levels of family obligation among immigrants in Germany compared to their Dutch counterparts, a finding which is not borne out in the results presented here.

Conclusion

Individual-level studies of intergenerational relationships tend to disregard the social contexts in which individuals and families are embedded. Yet macro-level comparisons consistently show variation in attitudes and behaviors related to intergenerational support across social contexts. Understanding the link between social contexts and individual-level behavior is complicated because frequently, the exact mechanism that produces differences across contexts is unknown, or at least cannot be formally tested using individual-level data. However, attempts should be made to document these links, especially given their significance in explaining a large portion of the variation in studies that draw on samples from more than one country.

For immigrants, this study suggests that there is no "universal" effect of immigrant status on intergenerational obligation. In fact, one point that emerges from this paper is that immigrants adapt to their surroundings in line with Gordon's (1964) early acculturation hypothesis. Although differences between first- and second-generation immigrants and natives remain even after controlling for demographic characteristics, attributing the residual effect of immigrant status to "cultural" differences belies the finding from this paper that nativity and immigrant-

41

generational differences in family obligation in fact vary greatly from one social context to another. To the extent that immigrants inherit a "culture" of family obligation from their country of origin, this culture is shaped and defined by the social contexts of the receiving society. This is an important and frequently neglected point in papers that examine nativity differences in intergenerational relationships. Although researchers tend to discuss normative values of immigrants in fixed terms, it is useful to consider how and when these norms are shaped by policies and the mainstream norms of the recipient society as well. More thoughtful analyses should move researchers away from ad-hoc explanations of culture towards a better understanding behind the potential mechanisms that produce differences in family behaviors for immigrants and natives.

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Table 1-1. Sample characteristics by country of residence

	Germany		Netherlands		
	% or Mean	S.D.	% or Mean	S.D.	Range
Immigrant generation					
3G Native	65.5	--	93.8	--	
1G Turk	26.0	--	5.5	--	
2G Turk	8.5	--	0.7	--	
Citizen of host country	67.7	--	97.6	--	
Female	51.8	--	57.8	--	
Age	45.2	16.1	46.3	14.9	18-81
Married	59.6	--	56.8	--	
Parent of co-resident child (<=18)	24.9	--	34.1	--	
Education					
Primary or less	7.1	--	10.3	--	
Secondary	69.9	--	57.2	--	
Tertiary/Other	23.0	--	32.5	--	
Employed	48.5	--	62.7	--	
N	11,683		6,780		

Table 1-2. Intergenerational obligation by country of residence and immigrant generation*

	Germany									
	1G Turk		2G Turk		Native		Global Wald Test[1]		1G=2G[2]	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	F	P-value	F	P-value
Grandparent's role	3.12	0.86	3.01	0.91	2.91	0.82	68.4	0.000	12.0	0.001
Parent's role	3.14	0.82	3.03	0.89	2.67	0.86	366.1	0.000	12.4	0.000
Adult child's role	3.09	0.86	3.12	0.86	2.17	1.01	1243.1	0.000	0.6	0.450
N	3,033		993		7,657					
	Netherlands									
	1G Turk		2G Turk		Native		Global Wald Test[1]		1G=2G[2]	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	X^2	P-value		
Grandparent's role	2.24	1.22	1.87	1.25	1.60	1.00	72.0	0.000	5.6	0.019
Parent's role	3.07	0.89	2.18	1.19	2.02	0.97	210.7	0.000	34.4	0.000
Adult child's role	2.72	1.11	2.16	1.17	1.24	0.89	491.6	0.000	15.5	0.000
N	374		45		6,361					

*Range: 0-4 for all outcomes

NOTES: 1) Wald tests for whether 1G and 2G are significantly different from 3G Natives; 2) Wald test for whether 1G is significantly different from 2G
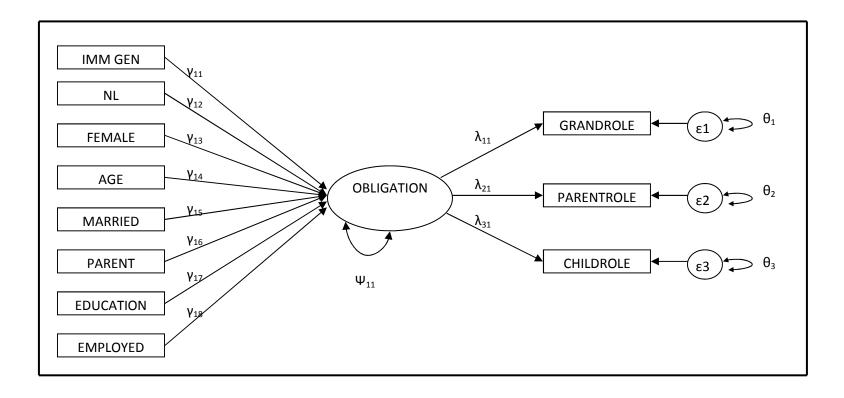
Table 1-3. Parameters for structural equation model for combined sample (N=18,463)

	MODEL 1		MODEL 2		MODEL 3	
	Estimate	S.E.	Estimate	S.E.	Estimate	S.E.
Structural model						
γ_{11} ImmGen--> Obligation	- 0.580***	0.01	- 0.214***	0.01	- 0.365***	0.05
γ_{12} NL--> Obligation			- 0.500***	0.01	- 0.443***	0.02
γ_{13} Female--> Obligation					- 0.028***	0.01
γ_{14} Age--> Obligation					0.144***	0.03
γ_{15} Married--> Obligation					- 0.126***	0.03
γ_{16} Parent--> Obligation					0.073***	0.02
γ_{17} Education--> Obligation					0.031	0.02
γ_{18} Employed--> Obligation					-0.005	0.01
Ψ_{11} Family Obligation	0.291	0.01	0.121***	0.01	0.112***	0.01
Measurement model						
λ_{11} Obligation-->Grandparent role	0.821***	0.01	1.041***	0.01	0.999***	0.01
λ_{21} Obligation-->Parent role	0.837***	0.01	0.861***	0.01	0.852***	0.01
λ_{31} Obligation-->Child role	1.000		1.000		1.000	
θ_1 Grandparent role	0.577***	0.01	0.415***	0.01	0.443***	0.01
θ_2 Parent role	0.561***	0.01	0.600***	0.01	0.595***	0.01
θ_3 Child role	0.373***	0.01	0.460***	0.01	0.442***	0.01
Model Fit						
DF	2		4		16	
Minimum Fit Function X^2	2920.5		6099.0		10503.4	
Normal Theory Weighted Least Squares X^2	2936.6		5574.4		9001.8	
Satorra-Bentler X^2	936.0		1059.0		427.7	
RMSEA	0.159		0.120		0.037	

*** $p<.01$; **$p<.05$; *$p<.10$

Table 1-4. Parameters from multisample analysis (N=18,463)

	MODEL 1				MODEL 2				MODEL 3			
	Germany		Netherlands		Germany		Netherlands		Germany		Netherlands	
	Estimate	S.E.	Estimate	S.E.	Estimate	S.E.	Estimate	S.E.	Estimate	S.E.	Estimate	S.E.
Structural model												
γ_{11} ImmGen--> Obligation	- 0.716***	0.04	- 1.226***	0.18	- 0.758***	0.04	- 0.825***	0.05	- 0.794***	0.04		
γ_{12} Female--> Obligation	0.027*	0.02	0.188***	0.09	0.035***	0.02			0.032*	0.02		
γ_{13} Age--> Obligation	0.181***	0.03	0.562***	0.15	0.252***	0.03			0.261***	0.03		
γ_{14} Married--> Obligation	- 0.180***	0.03	- 0.214***	0.09	- 0.215***	0.03			- 0.227***	0.03		
γ_{15} Parent--> Obligation	0.074***	0.03	- 0.333***	0.11	-0.001	0.02			0.016	0.02		
γ_{16} Education--> Obligation	0.181***	0.03	0.338***	0.09	0.204***	0.03			0.210***	0.03		
γ_{17} Employed--> Obligation	-0.019	0.02	0.491***	0.14	0.064***	0.02			0.062	0.02		
Ψ_{11} Family Obligation	0.152***	0.03			0.194***	0.02	Constrained to equality		0.196***	0.02	Constrained to equality	
Measurement model												
λ_{11} Obligation-->Grandparent role	0.548***	0.03			0.601***	0.02			0.594***	0.02		
λ_{21} Obligation-->Parent role	0.821***	0.03	Constrained to equality		0.821***	0.03			0.812***	0.03		
λ_{31} Obligation-->Child role	1.000				1.000				1.000			
θ_1 Grandparent role	0.844***	0.01			0.815***	0.01			0.817***	0.01		
θ_2 Parent role	0.649***	0.02			0.654***	0.02			0.659***	0.02		
θ_3 Child role	0.479***	0.03			0.487***	0.02			0.482***	0.02		
Model Statistics												
DF	34				40				41			
Minimum Fit Function X^2	9507.1				11103.7				11137.2			
Normal Weighted Least Squares X^2	7528.0				7990.9				8011.3			
Satorra-Bentler X^2	420.5				498.7				509.0			
RMSEA	0.035				0.035				0.035			
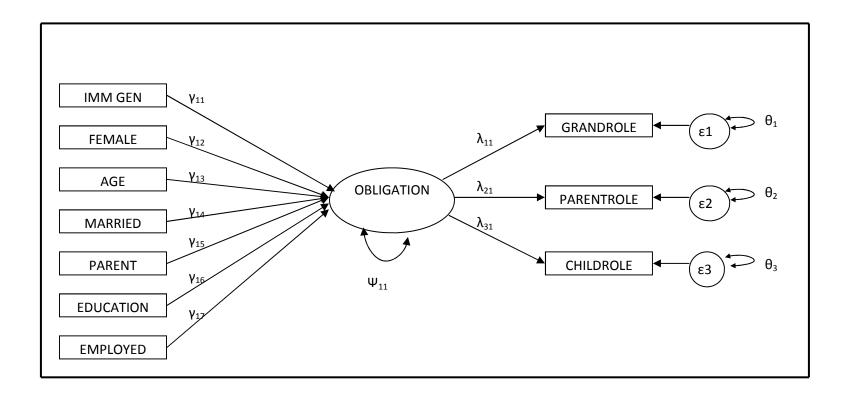
*** $p<.01$; ** $p<.05$; * $p<.10$

Figure 1-1: Path diagram for combined analysis (Table 1-3)*

Figure 1-2: Path diagram for multiple sample analysis (Table 1-4)*

APPENDIX TABLES

Appendix Table 1-1. RMSEA values from tests of metric invariance*

	Weak invariance (Lamdas only)	Strong Invariance (Lamdas and Thetas)
	RMSEA	RMSEA
1) Between immigrant generations	0.047	0.029
2) Between countries of residence	0.050	0.038
3) 1st generation Germany vs. 1st generation Netherlands	0.007	0.046
4) 2nd generation Germany vs. 2nd generation Netherlands	0.000	0.000
5) Native Germany vs. Native Netherlands	0.036	0.026

This tables presents results from a series of metric invariance tests to assess whether family obligation is understood in similar ways across different groups. The Root Mean Square Error of Approximation (RMSEA) is used to assess model fit. RMSEA values at or below .05 are generally considered a good model fit (Cai 2010).

CHAPTER 2: GUESS WHO'S COMING TO DINNER?
PARENT-CHILD TIES, MARITAL TIMING AND PARTNER CHOICE

Introduction

In the United States, marriage is commonly understood as a relationship between two individuals based on companionship, support and love. At the heart of these unions is also a fundamental understanding that it is individuals who make choices about when and whom they marry. Yet individuals do not marry randomly; social and family contexts influence union formation. This paper examines how individuals' relationships with mothers affect when individuals marry and whether they enter into same-race/ethnic (endogamous) or cross-race/ethnic (exogamous) marriages.

Background

Parents have long been considered important "third" parties who influence when and whom offspring marry. Parental resources and preferences are strongly associated with children's attitudes and behaviors. For example, prior research suggests that parents with greater socioeconomic resources delay children's marriage. Wealthier parents with greater incomes can provide children with an attractive home environment that delays entry into marriage (Axinn and Thornton 1992).

Separate from resources, parents' preferences about whether and when children should marry also influence the timing of offspring's unions. Prior research suggests that parental preferences for later age at marriage are strongly aligned with children's attitudes and behaviors regarding timing of marriage as well (Axinn and Thornton 1992). Among children of immigrants, norms regarding the timing of marriage based on parents' country of origin are strongly correlated with offspring's own marital timing (Kalmijn and Van Tubergen 2010; Soehl and Yahirun 2011; Zantvliet et al. 2012).

In addition to influencing whether and when children marry, parents are also involved with *whom* children choose as their partners. In the United States, parents historically provided advice and consent in the marriage process and many still influence offspring's decisions about potential mates (Gies and Gies 1989; Smith 1973; Whyte 1990). Parents may be involved in children's choices about spouses for several reasons: parents care about how the marriage and marital quality of offspring will affect parents' own lives, who an offspring marries affects parents' relationships with grandchildren, and the status of a child's partner may affect parents' standing in the community by bringing in socioeconomic resources or debts. Lastly, parents want their own children to be happy and may believe that certain partners are more likely to ensure children's happiness than others.

Family socialization is the main channel through which children take on attitudes and behaviors that their parents consider socially appropriate. This process can occur through emotional support, parental control, or via the internalization of parental attitudes and values.

Emotional support Parents may provide love, affection, warmth, nurturing and acceptance to children. This support shows that parents care about their children's actions and if children want to continue to receive this support, they will act in ways to please their parents. Emotional support may be conceptualized in several ways that include levels of warmth, trust, and care that parents provide to children, or the frequency, type and depth of communication between children and parents.

With respect to marital timing, prior research indicates that offspring who report being emotionally close to parents (e.g., who enjoy spending time with parents, who receive affection from parents and confide in parents) tend to marry earlier than those who report emotionally distant relationships to parents (Thornton, Axinn and Xie 2007; pg. 260). This finding seemingly

contradicts other research, which suggests that parental resources tend to delay marriage. However, strong emotional ties to the family could indicate a greater family orientation more broadly – which appears to in turn increase the probability of early, rather than later, marriage. In addition, individuals with strong relationships to family members may be more likely to develop ties to others more broadly. That is, good parent-child relationships may have spillover effects that lead to better interpersonal skills that further enable the development of intimate relationships.

In addition to the timing of marriage, prior research also finds that emotional ties between parents and children affect partner choice. In general, the stronger the ties across generations, the less likely offspring are to enter into exogamous unions. In dating relationships, adolescents who reported that their mother was warm, loving, or supportive of them were less likely to report being in interracial relationships compared to those with weak emotional ties to mothers (Wang et al. 2006). Offspring who more frequently talked to parents, both in general and more specifically about dates or parties were also less likely to report being in exogamous relationships (Huijnk and Liefbroer 2012; Wang et al. 2006). Finally, adolescents who dated across race/ethnic lines were also less likely to meet their partner's parents compared to those with same-race partners (Vaquera and Kao 2005). These findings highlight how emotional closeness to parents and frequent contact with parents tends to increase resistance to intermarriage because when family networks are tight, children may find it more difficult to bring in "strangers" who are unfamiliar with family norms.

Control and conflict Parents use their resources (e.g. affection, money) to prohibit or encourage children to behave in line with parents' expectations. However, too much social control may lead to conflicts between generations, which could hinder the intergenerational

transmission of values and attitudes (Schonpflug 2001). Previous scholars (Thornton 1991) have highlighted the role of parental control and intergenerational conflict on the timing of children's marriage. A poor home environment is known to make young adults more eager to leave home (Goldscheider and Goldscheider 1993). However, poor relations with family members may make offspring more hesitant about forming their own families. In addition, poor relationships with parents may indicate an inability to develop positive interpersonal relationships more broadly, thus hindering individuals from forming ties with potential partners.

Less is known about the effect of parental control and parent-child conflict on offspring's partner choice. It is possible that poor relationships with parents could lead children to defy parental marital expectations. In-depth interviews with native-born African American and White college students suggested that a main deterrent to initiating exogamous relationships was fear of upsetting or being disowned by parents (Harris and Kalbfleish 2000). In this case, parental control and strong emotional ties to parents may be working together to prevent children's intermarriage. Similarly, a study composed of participants from multiple race/ethnic backgrounds found that among those who were already married, individuals in endogamous marriages ranked parental approval of their relationship much higher on a list of 15 attributes that were important to their marriage compared to those in exogamous marriages (Gurung and Duong 1999). To the extent that parents prefer same-race unions, it is possible to infer that individuals who have poor and potentially conflictual relationships with parents are less likely to enter into such marriages, and may be more likely to marry exogamously, if at all.

Internalization of attitudes Finally, offspring's' internalization of parental attitudes and values occurs when children are embedded in the family context. Prior research suggests that children's attitudes about family formation and the path through which they form families are

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strongly correlated with parents' attitudes. For example, the path through which children enter romantic, co-residential unions – via direct marriage or cohabitation - is largely determined by parents' own attitudes about the acceptability of these unions, parental educational expectations, and attitudes about childbearing (Axinn and Thornton 1993; Barber 2000).

With respect to partner choice, Huijnk and Liefbroer (2012) show that there is a strong correlation between parents and children's attitudes about intermarriage even after accounting for parental and children's resources such as education. Parents may choose neighborhoods and schools that affect children's norms and preferences for a specific type of partner. In addition, parents could act as "models" by themselves being part of an exogamous union.

The internalization of values also may be influenced by different parenting styles. Authoritative parenting, which combines high levels of emotional support and moderate control, tends to produce harmonious parent-child relationships (Baumrind 1971). Authoritative parenting may also be more effective as a "transmission belt" through which values are passed across generations (Schonpflug 2001). On the other hand, authoritarian parenting, where parents provide low levels of support with coercive forms of control, could lead to resentment and distancing of children from parents. Children raised in these family contexts may not be receptive to parents' values and attitudes.

Moderation by race, ethnicity, immigrant status and gender

Family relationships may be particularly important for the determinants of marital timing and partner choice among some groups compared to others. As mentioned earlier, ties to kin positively affect rates of marriage among Whites, but not Blacks (Stokes and Raley 2011). Little, however, is known about whether relationships to family members differentially affect the timing of marriage among Asians and Hispanics. Research on ethnic minorities and children of

immigrants in the Netherlands suggests that parental involvement in partner choice is much more likely than among children of natives and ethnic Dutch families (Zantvliet et al., 2012). Extrapolating from this, one possibility is that among ethnic minorities and children of immigrants in the United States, those who have good relationships with parents and who hope to remain in parents' good graces will be more likely to marry endogamously than Whites, or children of natives.

Gender also may influence the relationship between parent-child ties and partner choice. Daughters face greater expectations to help aging parents than sons. Following marriage, women experience more frequent face-to-face and mail/phone contact with parents than sons. In addition, married daughters tend to live closer to their parents than they do to their in-laws (Lee, Spitze and Logan, 2003), in part because mothers provide essential forms of grandchild care (Compton and Pollak 2011). Knowing that they will likely take the lead role in being responsible for and interacting with aging parents may mean that daughters with strong ties to parents are more likely to marry endogamously than sons if same-race partners are more easily incorporated into the family unit.

Research Questions

This paper extends prior research on the link between intergenerational relationships and offspring's union formation behaviors in three important ways. First, I explore not only how parent-child relationships affect the timing of marriage but also the type of union – exogamous or endogamous – that offspring choose. Second, I use multiple indicators of parent-child relationships that assess parental emotional support, control and conflict to understand how these different dimensions influence offspring's union formation behaviors. Prior research frequently combines these measures into a single scale without understanding how different aspects of

parent-child relationships may separately influence union formation processes (Axinn and Thornton 1992; Thornton, Axinn and Xie 2007, for an exception see Huijnk and Liefbroer 2012). Third, I explore how the relationship between family ties and children's union formation behaviors varies by race/ethnicity, nativity status and gender. Previous research only examines differences between Blacks and Whites and overlooks the growing population of Hispanics and Asians in the United States (Stokes and Raley 2011). Nor has recent work examined the effect of immigrant status separately from race/ethnicity, which is surprising given evidence pointing to the importance of parental involvement in children's partner choice in immigrant families (Zantvliet et al. 2012).

My first research question asks whether positive emotional support from mothers during adolescence leads to 1) early marriage versus remaining single and 2) entry into endogamous, rather than exogamous unions. Second, I ask whether mother-child conflict when offspring are young leads individuals to 1) delay marriage and 2) enter into exogamous rather than endogamous unions. Third, I ask whether the link between intergenerational ties and union formation outcomes varies by race/ethnicity, immigrant status and gender. In particular, I predict that for ethnic minorities (African Americans, Hispanics and Asians), children of immigrants and daughters, strong mother-child ties will increase the probability of entering into same race/ethnic unions, compared to Whites, children of natives, and sons.

Data and Measures

To address these questions, this project uses data from the National Longitudinal Study of Adolescent Health (AddHealth). AddHealth is a longitudinal study of a nationally representative sample of adolescents in grades 7-12 in the United States during the 1994-95 school year. In 1994/5, the average respondent was aged 16. The Add Health cohort has been followed into

young adulthood with three additional in-home interviews in 1996, 2002 and most recently in 2008/9, when the average respondent was aged 29. The first wave consisted of approximately 20,745 adolescents including oversamples of African American respondents from well-educated families, Chinese- Cuban- and Puerto-Rican- origin adolescents as well as sibling pairs and respondents included for the genetic oversample. Sibling (half-sibling, twin) pairs and respondents in the genetic oversample were not assigned weights and in the analysis that follows, I exclude all individuals without weights at Wave 1 in order to increase the representativeness of the data (Chantala 2006). In 1996, 14,738 respondents were interviewed, 15,197 were interviewed in the third wave and 15,315 respondents were administered interviews in the fourth wave. Barring the respondent's death and ineligibility in previous waves, interviews with the original respondents were attempted at each wave, even if the respondent was not administered an interviewed in the previous wave. However, eligibility rules did differ slightly across waves.[12]

Comparisons between Waves 1 and 4 suggest that Hispanics were less likely to be interviewed in Wave 4 compared to other race/ethnic groups. In addition, first-generation respondents were also less likely to be in Wave 4 compared to second-generation immigrants or third-generation natives. One reason may be because respondents who had left the country permanently (which may affect first-generation respondents and Hispanics disproportionally) were not interviewed in Waves 2, 3 or 4. In addition, those who were unable to complete the interview because of language difficulties were not interviewed at later waves (Chantala et al.; Brownstein et al. 2010). See Appendix Table 2-1 for more details.

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[12] In wave 2, respondents who were in the 12th grade at Wave I and/or who were not part of the genetic/twin sample (the majority) were not re-interviewed because they exceeded age eligibility restrictions. In addition, respondents who were only in the Wave I disabled sample were not re-interviewed. In wave 3, individuals who were out of the country permanently or on active military duty were not re-interviewed. In wave 4, individuals who were on active-duty military and those who were out of the country permanently were ineligible for follow-up. In addition, 52 respondents, ages 33-34, were not included in Wave IV because they exceeded the targeted age range.

Add Health combines longitudinal survey data on respondents' social, economic, psychological and physical well-being with contextual data on parents, families, neighborhood, and romantic relationships. In this way, the data provide a unique opportunity to track individuals during and following adolescence, a critical period in the life course. Crucial for this study is that a complete roster of all relationships that the respondent ever had was collected in Wave 4. The respondent was asked to designate the start and end of these relationships, whether the relationship was still current and whether the relationship was a dating, pregnancy (without cohabiting or marriage), cohabiting or married relationship. In addition, the sex, race/ethnicity and age of each partner were asked. Information on partner's education was not asked, a limitation to the study which I address below.

Measuring Intergenerational Relationships

Another important aspect of the AddHealth data is that several questions about the respondent's relationship to mothers, fathers and the family as a unit were assessed at each survey wave, although the questions varied greatly across waves. In the study that follows, only respondents' relationships with mothers and the broader family unit are examined. I do not examine relationships with fathers for several reasons. First, relationships to fathers are conceptually distinct from ties to mothers. Mothers, as kin-keepers, maintain closer ties to offspring over the life course (Aquilino 1997). Second, approximately one-third of respondents did not report living with any father (biological, step- or adopted) at Wave 1. Thus, tracing relationships to fathers over time proved more difficult than examining trajectories of mother-offspring ties.[13]

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[13] In separate analyses not shown here, respondents' relationships to fathers were examined for the smaller sample of respondents who reported living with a biological father at wave 1. The preliminary results suggest that findings are similar to those reported on mothers.

At Wave 1, respondents were asked questions regarding emotional support from mothers. These measures are divided into distinct categories of *affective ties* to mothers versus *interaction* and *communication* with mothers. Affect, interaction and level of communication are all indicators of authoritative parenting, which in general facilitates intergenerational value transmission. With respect to affective ties, respondents were asked to report on 1) how emotionally close they were to their mother (5 point Likert scale, *Not at all* to *Extremely*), 2) whether they felt that their mother cared about them (5 point Likert scale, *Not at all* to *Extremely*) and 3) whether their mother was warm and loving toward them (5 point Likert scale, *Strongly disagree* to *Strongly agree*). In the analysis that follows, these items were grouped together in a factor-based scale that ranges from zero to one, where zero indicates a weak relationship to mothers and one indicates a strong relationship to mothers ($\alpha= 0.59$).[14] In addition, respondents were asked to report on whether they felt that mothers encouraged their independence (5 point Likert scale, *Strongly disagree* to *Strongly agree*).

With respect to interaction, respondents reported on the amount of time they spent with mothers in the past week on the following activities: shopping together, playing a sport together, going to church together, going to a movie/museum/other cultural event together, worked on a school project together. These items were added together to create an index that ranges from zero (*no activities*) to five (*all activities*).[15]

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[14] I begin with a factor analysis of these items, which I believe conceptually "hang together." Results from confirmatory factor analysis suggest that all factors load onto one item (affective ties to mother) at a loading of .5 or more and all items are positively associated with the factor. I combine these items into a single scale by first standardizing the items and then averaging across all standardizes items. For convenience of exposition, I then convert the scale from zero to one (Treiman 2009, pg. 249).

[15] In addition, respondents were asked how often they ate dinner with at least one parent (*1/week* to *7 times/week*).This measure was not included because it was not limited to mothers only; however, additional analyses also suggest that daily indicators of eating dinner with parents was not associated with union formation behavior.

Respondents were also asked about the level of communication they had with their mother in the past four weeks. I include two indicators that assess the depth of communication between mothers and offspring. The first indicator asks respondents whether they talked to their mothers about a personal problem they were having. The second indictor asks respondents whether they talked with their mothers about someone they were dating or a party they had attended.[16] These items are coded 1 if the respondent said yes and 0 if the respondent said no.

In addition, respondents were also asked a host of questions related to family belonging more generally. The respondent was asked to rate the degree to which they believed their family understood them, whether they had fun with their family, and whether their family paid attention to them. These items were grouped together in a factor-based scale and range from zero to one, where zero indicates a weak relationship to families and one indicates a strong relationship to families ($\alpha = 0.72$).[17]

Finally, I also include measures of conflictual relationships as they are broadly indicative of authoritarian parenting where parents use coercive forms of control to influence children's behaviors. I include respondents' reports about conflict and conflict resolution with mothers. Respondents were asked to report whether they had argued with their mother in the past four weeks (*yes/no*). In addition, respondents were asked to assess how conflicts with mothers were resolved. When asked: "When you do something wrong that is important, your mother talks about it with you and helps you understand why it is wrong", respondents assessed the degree to which the agreed with the statement (5 point Likert scale, *Strongly disagree* to *Strongly agree*).

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[16] In a separate analyses, respondents' reports of time spent with mothers related to school work were asked. This included: 1) whether the respondent worked on a school project with their mother in the previous 4 weeks, 2) whether the respondent talked to their mother about school work or grades in the previous 4 weeks, 3) and whether the respondent talked with their mother about other things that s/he was doing in school in the past four weeks. There was no association between time spent with mothers related to school work on union formation outcomes.
[17] See Footnote 3, above.

Conflict measures were coded such that higher scores indicated greater conflict and less conflict resolution. Appendix Table 2-2 presents the correlation between different measures of parent-child relationships.

Measuring Union Type

In this study, I consider first marriages only, as the vast majority (95%) of respondents has only been married once. These are on average young marriages given that the average respondent at Wave 4 is aged 29. Individuals are assigned values depending on whether they 1) endogamously marry, 2) exogamously marry, 3) or remain single. Individuals who marry within the same race/ethnic group include those who marry within the broad race/ethnic categories of non-Hispanic White, non-Hispanic Black, Asian, and Hispanic. Mixed race individuals (n=483) were asked to report the race/ethnicity they most closely identified with and were classified in that group. Individuals who identified solely as American Indian or Other (and were mixed race but also identified these groups as that with which they most closely identified) were dropped from the analysis (n= 228).

Other Independent Variables

Other independent variables of interest are the respondent's race/ethnicity, immigrant status, and gender. As stated earlier, respondents are categorized into four broad race/ethnic categories: non-Hispanic White, non-Hispanic Black, non-Hispanic Asian and Pacific Islander, and Hispanic (of any race). I use measures of race taken from in the "in-home" questionnaire, although many of the students also completed race measures in an "at-school" questionnaire. Previous research that matched students' responses found inconsistent racial identities for approximately 12% of the respondents (Harris and Sim 2002, pg. 619). The largest category consisted of students who reported being multiracial at school, but monoracial at home (5%). In

this study, I consider the respondent's racial categories as fixed, but realize that adolescents may in fact think of their own race/ethnic identity in more fluid terms.[18]

Respondent's immigrant status is assigned to two categories: 1) foreign-born respondents and native-born respondents with at least one foreign-born parent are categorized as children of immigrants, 2) native-born individuals with both native-born parents are classified as children of natives. A handful of respondents are native born with one native-born parent, but no information about mothers' and/or fathers' birthplace (usually father) is provided. For this handful of individuals (5%) I assign them to the category of children of natives.

I also include the respondent's age, whether or not they regularly attended religious service at Wave 1, whether the respondent was a parent, and the respondent's educational attainment (no high school, high school, some college, and college or more).[19] I include an indicator for whether the respondent moved across state lines in a given year, following previous research suggesting that residing further away from one's place of origin is associated with a greater probability of intermarriage (Rosenfeld and Kim 2005).

In addition to the respondent's characteristics, I also consider mother and household traits at Wave 1. This includes mother's age, educational attainment at wave 1, and mother's union type (endogamous, exogamous union or no union). Variables were also included to indicate whether the respondent was living with both biological parents at Wave 1, and the number of siblings living with the respondent at Wave 1. In addition, I include the proportion of individuals in the respondent's census tract at Wave 1 who share the respondent's race/ethnicity given

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[18] I plan to conduct additional analyses to assess whether the respondent's race/ethnic identification taken from the school survey changes the main results reported here. Respondents who report multiple race/ethnic identities may not be categorized as marrying exogamously if a more nuanced approach to understanding their race/ethnicity is taken into account.

[19] I do not include school enrollment status here because of complications in the way enrollment histories were collected and the inconsistent years between survey waves. Revisions to this paper will include imputations for enrollment status based on educational attainment histories.

previous research suggesting that early social environments may establish partner preferences (Kalmijn 1998). Finally, U.S. region of residence at Wave 1 (West, East, South, Mid-west) was also included as a survey design control.

Method

I conduct three separate steps of analyses to answer my research questions. I use discrete time event history models in the first two steps. Event history analysis is appropriate given that approximately half of the respondents interviewed at Wave 4 remain unmarried and thus are right-censored. Discrete time models are also chosen because data are collected across different survey years and retrospective histories on entry into parenthood, educational completion and residential moves are only reported on a yearly basis. I include both time-invariant and time-varying characteristics. Time-invariant traits include the respondent's race/ethnicity, immigration status, gender, religious attendance at Wave 1 and parent-child relationships reported at Wave 1. I include time-varying traits such as the respondent's educational attainment, parenthood status, labor force status and whether the respondent moved across states in the current year.[20] Mother characteristics also include mothers' age (time-varying), educational attainment (fixed at Wave 1), and partner type (fixed at Wave 1). Household traits at Wave 1 include whether the respondent lived in a two-parent biological household, the total number of siblings living with the respondent, and whether a language other than English was spoken at home. The proportion of individuals of the same race/ethnicity as the respondent who resided in the respondent's census tract is also fixed at Wave 1. I adjust the standard errors for repeated observations of individuals across time using Stata's –cluster- command (Nichols and Schaffer 2007).

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[20] Labor force status was captured at each survey wave and is imputed from the previous wave during non-survey years. No retrospective labor force histories are available.

I first estimate a series of discrete time event history models predicting whether or not respondents remain single or marry during each year under observation. Respondents enter the risk set at age 16. I assess three full models as part of the analysis. The first model includes the respondent's traits only; the second model adds in mothers' and household's characteristics and the third model includes a single measure of mother-child relationships. I examine each measure of parent-child relationships (affect, interaction, communication, family belonging, conflict) separately to better understand how different aspects of parent-child relationships influence offspring's' marital timing. I then present summary results for each measure.

Second, I ask how parent-child relationships affect entry into exogamous versus endogamous unions explicitly. I estimate a series of discrete-time competing risk models predicting for each year whether the respondent 1) remains unmarried, 2) enters into an endogamous union or 3) enters into an exogamous union. I use a competing risks model because I assume that every individual is at risk for both exogamous and endogamous unions throughout young adulthood. The plan of analysis is similar to that described above. I examine three separate models with the final model including a single indicator for parent-child relationships. Summary results are then also presented for each measure of mother-child relationships.

Finally, to supplement these analyses, I use log-linear models to explore whether the potential for intermarriage depends on group size. Log-linear analyses are useful because they account for the pool of eligible mates, which traditional regression models do not take into account. Another important feature is that log-linear models reveal which race/ethnic differences between prospective spouses are serious barriers to intermarriage and which differences are relatively permeable boundaries (Mare 1991). Previous research on race-ethnic unions relies heavily on this method (Fu 2001; Qian and Lichter 2007; Qian 1997).

Unlike the event history analysis, the log-linear analysis only includes respondents who are married. In addition, all individuals who married partners who were not part of the main race/ethnic groups (non-Hispanic White, non-Hispanic Black, Asian, Hispanic) used in the analysis were excluded (n=125). This produces a smaller analytical sample of 6,142 individuals/couples.[21] In this analysis, I compare a series of models to assess which model better fits the data. For each measure of parent-child relationship, I ask whether models that include an interaction term between union type (endogamous, exogamous) and relationship with mothers is a better fit to the data than models that do not include such interactions. This analysis allows me to assess whether there is an association between mother-child relationship and offspring's union type net of differences in the size of each race/ethnic group.

I use both event history and the log linear analyses to draw on the strength of each approach. The event history models allow me to include the large share of respondents who are unmarried at the latest period of data collection; however, the event history models do not take account of differences in the likelihood of endogamous/exogamous marriages that occur as a function of differences in race/ethnic group size. On the other hand, the log-linear models allow me to account for union types that occur as a function of race/ethnic group size. Comparing results across these analyses should provide a fair assessment of the robustness of the findings.

Sample Description

Because only Wave 4 respondents were asked to report on all their previous romantic partners, I use data from respondents who were interviewed at Wave 1 and re-interviewed at Wave 4 only. I only include individuals who reported living with their biological mothers as

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[21] Dropping certain types of exogamous marriages may have implications for my results. For example, exogamous marriages with partners of smaller race/ethnic groups (i.e., Native Americans or Others) who also have a smaller demographic presence may present less of a threat to parents and parents may have less influence over these types of unions if they are not viewed as truly exogamous.

opposed to step-mothers at Wave 1. Part of this decision was made because of the relative ease of tracing biological, compared to non-biological relationships over time.[22] However, step-mothers comprised less than 3% of all residential mothers at Wave 1. I exclude individuals who were married prior to their entry into the study, who were married during the first year under observation (when respondents were between the ages of 12 and 21) or who married before the age of 16. In addition, I also exclude individuals whose mothers die in the first year under observation. In total, the analytical sample for the first part of the analysis (selection into marriage type) includes 12,797 respondents (136,152 person-years).

Table 2-1 presents descriptive characteristics of the respondents used in the event history analysis (Appendix Table 2-3 presents descriptive characteristics of the sample as reflected in person-years). Approximately 49% of respondents had married by wave 4. Seven percent of respondents had entered into exogamous unions and the remaining 42% were married to same-race or same-ethnicity partners. The majority of the sample is White (70%), with African Americans (15%) and Hispanics (12%) also contributing a significant share to the sample. Approximately 15% of respondents are the children of immigrants. The sample is evenly divided between men and women. At Wave 1, only 1.6% of respondents reported being parents. The average respondent was approximately 17 years old during the initial year under observation.

INSERT TABLE 2-1 HERE

The majority of adolescents' mothers were between the ages of 25 and 49 at the initial year of observation, and approximately 45% had completed some college education. The majority of respondents reported that their mothers were married or in a cohabiting union at Wave 1 and approximately 6% of mothers indicated that their partner belonged to a different

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[22] AddHealth changed the referent for parents across survey waves making it virtually impossible to follow step-mother relationships across waves.

race/ethnicity than themselves. In addition, 63% of respondents reported living with both biological parents at Wave 1. Sibship sizes tended to be small with each respondent reporting living with 1.5 other siblings during the initial year under observation.

On average, respondents reported very strong relationships with mothers during adolescence. The mean standardized score for affective ties to mothers was quite high at 0.91 (s.d.=0.1). Most also agreed or strongly agreed that mothers encouraged them to be independent (83%). With respect to frequency of interaction, a mere 1% of respondents reported spending time with mothers for all activities (shopping together, playing a sport together, going to church together, going to a movie/museum/other cultural event together, worked on a school project together). However, approximately 50% reported spending time with mothers on at least two activities. In assessing the level of communication offspring reported with their mothers, 37% discussed a personal problem they were having. A greater share of 47% respondents, however, reported talking about a party or dates they went on with their mother in the past four weeks.

In addition to relatively strong social support from mothers, respondents also tended to report low levels of conflict and good conflict resolution. Approximately one-third reported arguing with their mothers in the past four weeks. Yet the vast majority (81%) agreed or strongly agreed that when they did something wrong, their mother helped them understand why it was wrong.

For broader relationships to the family as a whole, far fewer reported strong relationships. The average standardized score was 0.7 (s.d.=0.2). When broken down by item, few respondents strongly agreed that their families understood them (21%), that they had fun with the families (26%), or felt that their family paid much attention to them (30%) (percent distribution not shown here).

Results

How parent-child relationships influence entry into marriage

Table 2-2 presents results from logistic regression models where marriage is the predicted outcome and remaining single is the base outcome. The variables are entered into the model in a stepwise manner. Model 1 includes the respondent's traits only, whereas Model 2 includes mother and household traits and Model 3 includes affective ties to mothers – one measure of mother-child relationships. Results from Model 1 suggest that the respondent's race/ethnicity is a significant factor predicting entry into marriage. In general, Blacks, Asians and Hispanics marry at lower rates than Whites. After controlling for race/ethnicity, immigrant status does not influence the rate of marriage. With respect to gender, women are at a greater risk of early marriage than men, a finding that is repeatedly found in prior work. In addition, with increasing age, respondents are likely to marry although the squared term also indicates a non-linear effect. Religiosity – as measured by service attendance during adolescence - tends to increase the likelihood of marrying. Becoming a parent, completing higher education and working full time increases the odds of marrying comparing to remaining single. In addition, moving across state lines is associated with marrying rather than remaining single.

INSERT TABLE 2-2 HERE

In Model 2, mother's traits are included in the analysis. In general, the associations between the respondent's traits and the likelihood of marrying versus remaining single do not change. However, having an older mother (aged 50+) and a mother who is highly educated decreases the likelihood of entering into marriage. Growing up in a two-parent family with both biological parents slightly increases the probability of marriage compared to those who do not grow up with both biological parents.

Model 3 includes the respondent's affective ties to mothers. This inclusion does not change the associations between the respondent's or mother's traits and the probability of marriage. The results show a statistically insignificant effect of affective ties in predicting offspring's marriage.

Table 2-3 presents results for models that include the same predictors as Model 3 in Table 2-3 but for different dimensions of parent-child ties. It is apparent that in addition to affective ties between mothers and offspring, mother's encouragement of offspring's independence and frequency of interaction with mothers has no effect on the timing of marriage. Yet communication between respondents and their mothers matters; offspring who report confiding in their mothers about a personal problem, or those who discussed parties or dates are more likely to enter into marriage than those who did not discuss such topics with mothers. Respondents who felt a greater sense of family belonging are also more likely to marry than remain single compared to those who did not feel as well integrated into the family unit.

INSERT TABLE 2-3 HERE

Finally, measures of conflicts between mothers and respondents suggest that respondents who grow up in discordant households are more likely to delay marriage than those who grow up in less conflictual homes. Respondents who indicated arguing with their mother in the past week are 9% less likely to marry than respondents who did not report arguing with mothers. In addition, those whose mothers failed to explain why something they did was wrong – an important component of authoritarian parenting – also tended to delay entry into marriage.

How parent-child relationships influence partner choice

In Table 2-4, results are presented from the multinomial logistic model where never marry is the base outcome, and entry into exogamous versus endogamous unions are the

competing outcomes. Again, variables are entered into the model in a stepwise manner. Model 1 includes the respondent's traits only, whereas Model 2 includes mother and household traits and Model 3 includes relationship to mothers and the broader family. Test results are also shown in a separate column indicating statistically significant differences between entry into exogamous versus endogamous unions. Results from Model 1 show that race/ethnicity is a significant factor predicting the type of marriage individuals enter. In general, Blacks, Asians and Hispanics are more likely than Whites to enter into exogamous versus endogamous unions (see far right column under Model 1, p-value<.01). This is in part because chances to marry endogamously increase when one interacts with group members on a daily basis. Small race/ethnic groups – such as Blacks, Asians and Hispanics, have fewer changes of meeting members of their own race/ethnic group, but have more opportunities to meet and marry Whites because Whites are the racial majority. Intermarriage that occurs because of differences in race/ethnic group sizes is the main reason I later use also use log-linear analysis to estimate the association between mother-child relationships and union type.

<center>INSERT TABLE 2-4 HERE</center>

Women are in general less likely to enter into exogamous rather than endogamous unions (p-value<.05). Increased service attendance was much more likely to lead to endogamous, rather than exogamous unions (p-value<.01). Education, parenthood and labor force participation had no effect on predicting entry into exogamous versus endogamous unions. However, moving across state lines is associated with marrying exogamously compared to endogamously (p-value<.01).

In Model 2, mothers' traits are included into the analysis. Here, the associations between the respondent's traits and the likelihood of entering into endogamous versus exogamous unions

<center>77</center>

remain for the most part unaltered. However, mothers' traits do matter. Having a highly educated mother and a mother who herself is in an exogamous union greatly increases the odds of marrying outside of one's race/ethnicity compared to marrying endogamously.

A number of household traits were also significant predictors of entry into cross-race versus same-race unions. Having more siblings (p-value<.01) and living in neighborhoods with a greater share of co-ethnics (p-value<.01) was associated with a higher risk of marrying within race/ethnic lines compared to marrying across those boundaries. Model 3 includes the respondent's affective ties to her/his mother. Affective ties were not associated with marrying exogamously versus endogamously.

Table 2-5 presents results for similar models that include different dimensions of parent-child relationships. Unlike the findings predicting entry into marriage, children with mothers who encouraged their independence were more likely to enter into endogamous, rather than exogamous unions (p-value=.069). However, other indicators of emotional support such as frequency of interaction and level of communication with mothers were not significant predictors of entering into exogamous, rather than endogamous unions. On the other hand, offspring who felt a strong sense of family belonging were less likely to intermarry, but were more likely to marry within race/ethnic lines than those with a weaker sense of family belonging (p-value<.01). Finally, family conflict and not resolving conflicts decreased the probability of marrying within race/ethnic boundaries compared to marrying exogamously.

INSERT TABLE 2-5 HERE

Interactions

Additional analyses (not shown here) tested whether the relationship between parent-child ties and marital timing as well as partner choice varied by the respondent's race/ethnicity,

immigrant status, and gender. With respect to marital timing, Asians (compared to Whites) and children of immigrants (compared to children of natives) who had strong relationships with mothers tended to delay marriage. However, no significant interactions were found when testing for differences between marrying exogamously versus marrying endogamously. That is, the relationship between family ties and partner choice did not vary across race/ethnicity, immigrant status or gender in the event history analysis.

Log linear analysis

To supplement the event history analyses, log-linear models were estimated to assess whether the association between mother-child relationships and union type is significant. Again, these models are particularly useful because they account for differences in the prevalence of endogamous/exogamous marriages that occur as a function of variation in ethnic/racial group size. For example, when Whites and Asians intermarry, it may be because Asians are simply more likely to interact with and thus marry Whites. These unions could occur for other reasons, however, that are unrelated to differences in group size. This is the main strength of the log-linear analysis.

This analysis excludes all respondents who are unmarried and those whose partners do not identify with the main race/ethnic groups discussed here (Whites, Blacks, Asians or Hispanics). Table 2-6 presents the basic table from which the log-linear models are fitted. The models assume that the expected counts in the marriage table are a multiplicative function of sample size, the number of respondents and partners in a given race/ethnic group, mother-child relationships, and a parameter that measures marriage selection independent of the marginal row and column distributions – in this case, a simple indicator of exogamous or endogamous unions.

The models do not include nativity status because nativity status for partners is not provided in the AddHealth data.

INSERT TABLE 2-6 HERE

Tables 2-7A through 2-7H present tests of model fit for each individual measure of mother-child relationships. Table 2-7A presents fit statistics where the measure of affective ties to mother is included in the model. Model 0 presents fit statistics for the saturated model, where each term in the model is a three-way interaction between the respondent's race (X), partner's race (Y), and affective ties to mother (Z), dichotomized such that weak ties=0 and strong ties=1. I re-categorized the variable so that "weaker" relationships represented those below the median, and "strong" relationships represented those that were at or above the median. As always with the saturated model, the likelihood ratio test (G^2) is equal to zero, with a p-value equal to 1. The Bayesian information criterion (BIC) statistic for saturated models is always zero. Model 1 shows fit statistics for a model where the three-way interaction between respondent's race, partner's race and relationship to mothers is not included. Instead, only associations between the respondent's own race and partner's race (XY), respondent's race and relationship to mother (XZ) and partner's race and relationship to mother (YZ) are included. The likelihood ratio test for model 1 shows that at 9 degrees of freedom (32 terms in saturated model-23 terms in reduced model=9), the probability of predicting the data is fairly low, at 17.0% (p=.17).[23] However, notice that BIC is large and negative at -65.8. Model 2 includes the same parameters as Model 1 but also includes a parameter for whether the union is endogamous (=0) or exogamous (=1) and also interacts that indicator with affective ties to mothers. We see that the model fit is

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[23] Another way of interpreting this statistics is that if G^2 is significant, then the inclusion of the predictor makes the full model (saturated model) a better fit to the data than the reduced model.

ambiguous; BIC is not as negative as Model 1, but the likelihood ratio test suggests that there is a 23.2% probability of predicting the data (p<.232). I test Models 1 and 2 against one another in a likelihood ratio test (not shown here). The results suggest that the more parsimonious Model 1 provides a better fit to the data (LR X^2=2.20 (1), p-value=0.138). Thus we can say that affective ties between respondents and mothers have little effect on the distribution of marriages across race/ethnic categories.

Fit statistics for models that include other measures of mother-child relationships are presented in Table 2-7B through Table 2-7H. In instances where fit statistics showed ambiguity as to the best model fit, for example when BIC values were large and negative but G2 and p-values suggested a poorer fit, additional log-likelihood tests were conducted similar to the method described above (not shown here). Family belonging (Table 2-7F) and arguing with mothers (Table 2-7G) did influence the count of intermarried couples in the data. Models that include an interaction between these measures of mother-child relationships and whether the union was exogamous or endogamous fit the data better than the saturated model and the no three-way-interaction model. On the other hand, mother's sense of encouragement, frequency of interaction with mothers, discussing problems or dates/parties with mothers and not resolving conflict with mothers does not influence the distribution of marriages in the observed data. That is, for models that included whether mothers encouraged the respondent's sense of independence (Table 2-7B), frequency of interaction with mothers (Table 2-7C), discussing a personal problem (Table 2-7D), a date/party with mothers (Table 2-7E), or not resolving conflicts with mothers (Table 2-7H), fit statistics suggest that models that exclude a three-way interaction term are the best model fit.

INSERT TABLES 2-7A THROUGH 2-7H HERE

Table 2-8 presents the odds of entering into an endogamous versus exogamous union based on frequencies calculated from the preferred model. Here I only focus on those models where the best fit included an interaction term between union type and mother-child relationship. For all race/ethnic groups, it appears that having a stronger (vs. weaker) sense of family belonging tends to increase the odds of marrying within race/ethnic boundaries rather than across race/ethnic boundaries. On the other hand, arguing with mothers tends to have the opposite effect. Among Whites, Hispanics and Asians, conflictual relationships with mothers lowered the odds of marrying within race/ethnic boundaries compared to marrying exogamously. The only exception here is Blacks. Appendix Table 2-4.1 through 2-4.8 present parameters for the preferred model for each measure of mother-child relationship.

<center>INSERT TABLE 2-8 HERE</center>

Discussion

Over the past century, fundamental changes to the economy, coupled with urbanization and educational expansion, have allowed many young adults to leave home at earlier ages today compared to previous generations (Ruggles 2007).[24] The rise in an independent life stage, a time when offspring are free from their families of origin but have yet to form their own families, has provided young adults with new opportunities to diverge from parental expectations about when and whom to marry. Recent research thus asserts that parental influence on children's marital behavior is waning (Rosenfeld and Kim 2005).

However, this does not mean that parents' influence on children's marital behavior has disappeared altogether. In the United States, recent studies have also found that parents'

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[24] In recent years, however, the age at home-leaving has been rising due to a number of factors, including protracted schooling and longer amounts of time needed to find secure, stable employment (see Furstenberg et al. 2004).

attitudes, family resources and parents' ties to children continue to influence offspring's marital timing (Axinn and Thornton 1992; Thornton, Axinn and Xie 2007). Findings from this paper support this latter body of work. As predicted, strong emotional support from mothers and a greater sense of family belonging generally increase the likelihood of marriage compared to remaining single. It could be that these individuals are simply more family-oriented and thus go on to form their own families at younger ages. Another plausible explanation is that those who have good relationships with their families have better interpersonal skills in general that enable them to develop intimate relationships with partners.

Yet the effect of parent-child relationships on when children marry is moderated somewhat by the respondent's background. Children of immigrants and Asians who report strong ties to their mothers tend to delay marriage, compared to children of natives and Whites who also reported strong ties to mothers. This paper does not find a difference between Blacks and Whites as suggested in earlier work, although a potential explanation for this discrepancy is that previous authors (Stokes and Raley 2011) use data from all adults whereas this paper uses data on young adults. However, the findings are relevant for Asians and Hispanics, for who stronger ties to mothers leads to a delay in marriage.

In addition to positive emotional support, offspring who report greater conflict with mothers and less conflict resolution are more likely to delay marriage than those who report less tense relationships with mothers. Earlier research found that children raised in households where parents had divorced or remarried tended to leave home earlier than their counterparts who had not experienced family disruption (Goldscheider and Goldscheider 1993). The results found in this study also suggest that negative home environments – characterized by arguments and less

conflict resolution – also has long-term consequences on when and whether offspring form their own families.

Beyond understanding how parent-child ties shape the timing of marriage, this paper finds that ties to parents affect whom offspring marry as well. In general, strong emotional support between mothers and offspring tends to increase the probability of entering into a same-race marriage, rather than a union that crosses race/ethnic boundaries. However, the effect of different aspects of mother-child relationships on offspring's partner choice varied across the event history and log linear analyses. In the event history analysis, children whose mothers encouraged their independence were more likely to enter into endogamous rather than exogamous unions, whereas this finding was not robust in the log-linear results. One reason for this discrepancy may be the way in which the measure is entered into the model in the different analyses. In the event history models, mothers' encouragement of independence is a continuous variable ranging from one to five, whereas in the log-linear models, this variable is entered into the model dichotomously. This may produce differences in the results. However, the majority of the results for emotional support were in fact robust across both analyses. Affective ties and talking to mothers about dates or parties were not significant in either analysis, but family belonging increased the odds of intermarriage rather than endogamous marriage in both the event history and log-linear models.

An equally important finding is that children who experienced greater family conflict were less likely to marry someone of the same race/ethnic group and were more likely to marry outside of their race/ethnicity than their peers who experienced less conflict with mothers. Measures related to arguing with mothers are robust across the event history and log linear analyses, although the finding that less conflict resolution leads to exogamous unions was only

supported in the event history analysis. Again, this finding may be related to the way in which the measure for conflict resolution was entered into the analyses. In the event history models, the variable is entered continuously, whereas in the log-linear models, the variable is entered dichotomously. However, the finding that negative home environments also lead to intermarriage rather than endogamous unions warrants greater attention. One possibility is that offspring who are raised in tumultuous home environments may attempt to break away from their family of origin and when they choose to marry, may seek to assert their new identity via their partner's race/ethnicity. Another explanation is that children who have bad relationships with parents in adolescence may continue to have poor relationships with parents into young adulthood and consequently may not care to consult parental opinions when choosing a partner.

While illuminating, findings from this paper are far from conclusive. The study presents a number of limitations and sheds light on areas that are in need of greater work. First, the analyses conducted here do not include information on partners' education. Prior research shows that in the United States, the expansion of race/ethnic intermarriage is correlated with the increasing educational attainment of ethnic minorities (Qian and Lichter 2011). Unfortunately, AddHealth did not collect information on the educational attainment of partners for respondents interviewed at Wave 4.[25] Parent-child ties may have a significant effect on the race/ethnicity of the respondent's partner, but may have an even greater influence on the socioeconomic background of that spouse. Children with strong emotional ties to parents may want to meet parental

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[25] In Wave 3, 1,507 respondents and their partners were interviewed for a "partner sample." One-third of the respondents were married, one-third was cohabiting and one-third was dating. Information on partner's education was also collected. Future analyses will examine these 500 couples to determine the association between educational homogamy and race/ethnic endogamy and their relation to parent-child ties.

expectations of marrying someone from a similar class background, a trait that may be far more important than a partner's race or ethnicity.

Second, this study is limited to ties to mothers. The study examines mothers' ties to children given mother's greater connection to offspring over the life course, although clearly fathers' ties to offspring are also important. In preliminary analyses of these data, however, there were few differences in the effects of mothers' versus fathers' ties on the respondent's marital timing or partner choice. Third, I do not have information on the partner's relationship to his/her mother. It is clear that those parent-child relationships will also influence the timing and type of marriage individuals enter. Finally, only first marriages are analyzed in this paper. Based on previous research, it is possible that parent-child relationships are also largely influential on whether children enter directly into marital unions, or first cohabit and then marry later. Yet there is some evidence that parent-child ties have less significance for interracial dating or cohabitation than they do for marriage (Zantvliet et al. 2012). Future research should explore this topic, especially given the prevalence of non-marital cohabitation among recent cohorts of young adults (Seltzer 2000).

Despite these limitations, this study provides empirical evidence that mothers – and specifically, ties to mothers – have a significant influence on individuals' family formation behaviors. Few studies, if any, have investigated how intergenerational ties during adolescence affect marital timing and partner choice in early adulthood. The study points to the importance of understanding how different aspects of family relationships – such as emotional support and family conflict - are part of a broader arsenal of parental resources that influence young adults' family formation decisions.

Although U.S. trend data suggest that attitudes towards intermarriage have grown more tolerant over time, deterrents to exogamous unions continue to exist (Rosenfeld 2007). Parents in particular may hinder the formation of offspring's romantic relationships with partners of different racial and ethnic origins than their own. These efforts may be intentional; some parents may simply prefer children to marry within their race/ethnic group, and children, especially those who have good relationships with parents, may be eager to comply with parents' preferences. However, the process may be also take place in less obvious ways. Strong ties to parents could encourage offspring to find partners who are easily integrated – at least superficially - into the family. Either way, the findings hint at ways in which family networks remain racially and ethnically homogenous over time. These findings should also be framed in the context of rapidly increasing ethnic and racial diversity in the United States. Strong family ties, which have multiple positive consequences for young adult outcomes, may lead to greater race/ethnic stratification if children who are intermarried do not maintain strong ties to parents. More research is needed to understand how intermarriage also affects ties to parents in later life.

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TABLES

Table 2-1. Descriptive traits at wave 1 (persons)*

Respondent's traits	Percent/Mean	S.D.	Household's traits	Percent/Mean	S.D.
Respondent's traits			*Household's traits*		
Final union type			R living with both bio parents at w1	63.1	
Never married	51.4		R's total number of siblings at t1	1.5	1.2
Exog	7.1		Non-English at home at t1	6.9	
Endog	41.6		Prop. same race.ethnic group in tract at t1	0.8	0.3
Race/Ethnicity			*Affective ties to mother (t1)*		
Non-Hispanic White	69.5		Emotional ties to mother scale[2]	0.9	0.1
Non-Hispanic Black	15.1		Mother encourages independence		
Non-Hispanic Asian	3.2		Strongly disagree	1.0	
Hispanic	12.2		Disagree	4.1	
Bio Child of immigrants	15.1		Neither	11.9	
Female	49.9		Agree	42.2	
Age[1]	16.7	1.0	Strongly agree	40.9	
Religious service attendance[1]			*Interaction with mother (t1)*		
Never/no religion	25.3		Frequency of interaction with mother index[3]		
<1/month	17.4		0 (no activities)	13.8	
>1/month but <1/wk	19.1		1	35.0	
>=1/week	38.2		2	31.7	
Parent[1]	1.6		3	13.8	
Education[1]			4	4.7	
No HS	83.0		5 (all activities)	1.0	
HS	16.9		*Level of communication with mothers*		
Some college	0.1		R talks to mother about personal problem	37.4	
BA+	--		R talkes to mother about dates/parties	46.9	
Labor Force Status[1]			*Control and Conflict*		
Not employed	29.0		R argued with mother	33.6	
Part-time	44.0		R's mother explains why something is wrong		
Full-time	26.9		Strongly disagree	1.4	
Ever moved to another state	35.9		Disagree	5.7	
Mother's traits			Neither	11.2	
Mother's age[1]			Agree	46.2	
Mother died since wave 1	0.1		Strongly agree	35.6	
25-49	92.0		*Family relationships (t1)*		
50+	7.9		Family belonging scale[4]	0.7	0.2
Education			*Controls*		
<8grade	4.9		Region of residence at t1		
8<grade<12	11.6		West	16.0	
HS/GED	37.3		Midwest	31.8	
Some college	20.5		South	38.5	
College or more	25.7		Northeast	13.7	
Mother's partner status at t1					
No partner	30.5				
Different race/ethnic partner	5.8				
Same race/ethnic partner	63.7				
Unweighted N			**12,797**		

*Percentages and means are w eighted. Percentages may not equal 100 due to rounding.

[1] Time-changing variable [2] Respondents w ere asked to report on 1) how emotionally close they w ere to their mother, 2) w hether they felt that their mother cared about them, and 3) w hether their mother w as w arm and loving tow ard them. Responses ranged from 1 to 5. These items w ere grouped together and re-scaled to range from 0 to 1, w here 0 indicates a w eak relationship to mothers and 1 indicates a strong relationship to mothers. [3] Respondents reported on the amount of w hether they did the follow ing w ith mothers in past w eek: shopping, playing a sport, going to church, going to a movie/museum/other cultural event, w orked on a school project. These items w ere added together (0=no activities, 5=all activities). [4] The respondent w as asked to rate the degree to w hich they believed their family understood them, w hether they had fun w ith their family, and w hether their family paid attention to them. Responses ranged from 1 to 5 (1: Not at all to 5: Very much). These3 items w ere combined into a factor-based scale and re-scaled to

Table 2-2. Parameters from binomial logistic regression model predicting entry into marriage (N=136,152 pyrs)

	Model 1 (Respondent's traits only)			Model 2 (Model 1 + Family traits)			Model 3 (Model 2 + Relationship to mother)		
	O.R.	Z-score	p-value	O.R.	Z-score	p-value	O.R.	Z-score	p-value
Respondent's Traits									
Race (base: White)									
Black	0.29	-27.6	0.000	0.30	-23.3	0.000	0.30	-23.3	0.000
Asian	0.55	-8.3	0.000	0.57	-6.8	0.000	0.57	-6.7	0.000
Hispanic	0.75	-5.6	0.000	0.71	-5.3	0.000	0.71	-5.3	0.000
Child of immigrants	1.06	1.3	0.199	1.05	1.0	0.321	1.05	1.0	0.320
Female	1.28	8.7	0.000	1.27	8.6	0.000	1.28	8.7	0.000
Age[1]	3.77	26.1	0.000	3.74	25.9	0.000	3.73	25.9	0.000
Age squared[1]	0.97	-24.3	0.000	0.97	-23.9	0.000	0.97	-23.9	0.000
Religious attendance[1] (base: Never/no religion)									
<1/month	1.26	6.0	0.000	1.27	6.2	0.000	1.27	6.1	0.000
>1/month but <1/wk	1.51	9.6	0.000	1.52	9.8	0.000	1.52	9.7	0.000
>=1/week	1.92	16.2	0.000	1.93	16.2	0.000	1.92	16.1	0.000
Parent	2.55	24.3	0.000	2.50	23.5	0.000	2.50	23.5	0.000
Education[1] (Base: no HS)									
HS	1.22	5.0	0.000	1.23	5.2	0.000	1.23	5.1	0.000
Some college	1.24	4.5	0.000	1.29	5.2	0.000	1.28	5.2	0.000
BA+	1.70	10.7	0.000	1.86	12.0	0.000	1.85	11.9	0.000
Labor Force Status[1] (Base: Not employed)									
Part-time	0.93	-1.4	0.172	0.93	-1.5	0.145	0.93	-1.5	0.142
Full-time	1.33	6.5	0.000	1.31	6.1	0.000	1.31	6.1	0.000
Moved to another state[1]	1.55	9.1	0.000	1.59	9.6	0.000	1.59	9.6	0.000
Mother's and Household's traits									
Mom's age[1] (base: 25-49)									
50+				0.81	-6.7	0.00	0.81	-6.7	0.00
Mother died since wave 1				0.90	-1.0	0.34	0.90	-1.0	0.34
Education (base: <8grade)									
8<grade<12				0.97	-0.4	0.712	0.97	-0.4	0.691
HS/GED				0.89	-1.7	0.096	0.89	-1.7	0.089
Some college				0.91	-1.3	0.202	0.91	-1.3	0.194
College or more				0.74	-4.1	0.000	0.74	-4.1	0.000

Cont. from Table 2-2 above

Table 2-2. Parameters from binomial logistic regression model predicting entry into marriage (N=136,152 pyrs)

	Model 1 (Respondent's traits only)			Model 2 (Model 1 + Family traits)			Model 3 (Model 2 + Relationship to mother)		
	O.R.	Z-score	p-value	O.R.	Z-score	p-value	O.R.	Z-score	p-value
Mother's partner type (Base: No partner)									
Exogamous partner				0.99	-0.2	0.821	0.99	-0.2	0.823
Endogamous partner				0.96	-1.2	0.222	0.96	-1.2	0.240
R living with both bio parents at w1				1.09	2.5	0.014	1.09	2.4	0.016
R's total number of siblings at t1				1.01	0.5	0.647	1.01	0.5	0.600
Proportion of tract is same race				1.00	0.0	0.965	1.00	-0.1	0.961
Affective Ties to mother							1.21	1.6	0.103
Log liklihood	**-23124.2**			**-23064.2**			**-23062.6**		

NOTES: Model controls for region of residence at t1

Table 2-3. Parameters from binomial logistic regression model predicting entry into marriage by mother-child relationship (N=136,152 pyrs)

	Full model*		
	O.R.	Z-score	p-value
	Outcome = Marry or Not		
Emotional Support at t1			
Affective ties to mother	1.21	1.6	0.103
Mother encourages independence	1.01	0.5	0.588
Frequency of interaction with mother	0.99	-0.9	0.345
Talks to mother about personal problem	1.09	2.9	0.004
Talks to mother about dates/parties	1.24	7.7	0.000
Family Belonging	1.20	2.6	0.008
Conflict with mom at t1			
Argue with mom	0.91	-3.1	0.002
Mom did not explain why something was wrong	0.97	-2.2	0.030

*Model 3 from Table 2: All models control for: respondent's race/ethnicity, immigrant status, gender, age, religious attendance at W1, parental status, education, labor force status and whether the respondent moved across state borders before marriage. In addition, all models also control for mothers' traits, including mother's age (if alive), education, and whether she was in an endogamous/exogamous union at w1 (if partnered at all). Household traits include whether the respondent lived with both biological parents at W1, number of coresident siblings at W1 and the percent same-ethnicity in the respondent's home tract at W1. Region of residence (West, East, MidWest and South) was also included in the model.

Table 2-4. Parameters from multinomial logistic regression model predicting entry into exogamous or endogamous marriage vs. remaining single (N=136,152 pyrs)

	Model 1 (Respondent's traits only)						
		Exog			Endog		exog ≠ endog
	O.R.	Z-score	p-value	O.R.	Z-score	p-value	
Respondent's Traits							
Race (base: White)							
Black	0.62	-4.3	0.000	0.26	-28.2	0.000	***
Asian	2.51	6.0	0.000	0.37	-11.9	0.000	***
Hispanic	3.09	9.7	0.000	0.53	-11.7	0.000	***
Child of immigrants	0.64	-4.1	0.000	1.23	4.3	0.000	***
Female	1.10	1.4	0.161	1.32	9.1	0.000	**
Age[1]	3.18	9.4	0.000	3.93	24.6	0.000	
Age squared[1]	0.98	-8.7	0.000	0.97	-23.0	0.000	*
Religious attendance[1] (base: Never/no religion)							
<1/month	1.15	1.6	0.118	1.28	5.9	0.000	
>1/month but <1/wk	1.28	2.5	0.014	1.56	9.5	0.000	*
>=1/week	1.31	2.8	0.005	2.05	16.5	0.000	***
Parent	2.69	11.3	0.000	2.52	22.2	0.000	
Education[1] (Base: no HS)							
HS	1.18	1.7	0.088	1.23	4.8	0.000	
Some college	1.34	2.6	0.009	1.22	3.8	0.000	
BA+	1.69	4.3	0.000	1.70	9.9	0.000	
Labor Force Status[1] (Base: Not employed)							
Part-time	0.91	-0.8	0.431	0.94	-1.2	0.243	
Full-time	1.33	2.7	0.006	1.34	6.0	0.000	
Moved to another state[1]	2.21	7.4	0.000	1.44	7.0	0.000	***
Mother's and Household's traits							
Mom's age[1] (base: 25-49)							
50+							
Mother died since wave 1							
Education (base: <8grade)							
8<grade<12							
HS/GED							
Some college							
College or more							
Mother's partner type (Base: No partner)							
Exogamous partner							
Endogamous partner							
R living with both bio parents at w1							
R's total number of siblings at t1							
Proportion of tract is same race							
Affectives ties to mother							
Log liklihood			-25611.1				

NOTES: Model controls for region of residence at t1

***<.01; **<.05; *<.10

Table 2-4. Parameters from multinomial logistic regression model predicting entry into exogamous or endogamous marriage vs. remaining single (N=136,152 pyrs)

	Model 2 (Model 1 + Family traits)						exog ≠ endog
	Exog			Endog			
	O.R.	Z-score	p-value	O.R.	Z-score	p-value	
Respondent's Traits							
Race (base: White)							
Black	0.29	-8.9	0.000	0.31	-21.4	0.000	
Asian	0.76	-1.6	0.120	0.50	-7.2	0.000	**
Hispanic	0.97	-0.2	0.832	0.60	-7.2	0.000	***
Child of immigrants	0.90	-1.0	0.325	1.15	2.6	0.009	**
Female	1.13	1.7	0.089	1.30	8.6	0.000	**
Age[1]	3.19	9.4	0.000	3.89	24.5	0.000	
Age squared[1]	0.98	-8.6	0.000	0.97	-22.7	0.000	*
Religious attendance[1] (base: Never/no religion)							
<1/month	1.18	1.8	0.067	1.29	6.1	0.000	
>1/month but <1/wk	1.32	2.7	0.007	1.57	9.7	0.000	
>=1/week	1.35	3.1	0.002	2.08	16.6	0.000	***
Parent	2.65	10.9	0.000	2.48	21.5	0.000	
Education[1] (Base: no HS)							
HS	1.18	1.7	0.096	1.24	5.0	0.000	
Some college	1.29	2.3	0.025	1.28	4.7	0.000	
BA+	1.60	3.7	0.000	1.91	11.6	0.000	
Labor Force Status[1] (Base: Not employed)							
Part-time	0.88	-1.1	0.265	0.94	-1.1	0.273	
Full-time	1.30	2.5	0.012	1.32	5.7	0.000	
Moved to another state[1]	2.10	6.8	0.000	1.50	7.7	0.000	***
Mother's and Household's traits							
Mom's age[1] (base: 25-49)							
50+	0.88	-1.8	0.079	0.80	-6.6	0.000	
Mother died since wave 1	0.89	-0.5	0.643	0.90	-0.9	0.382	
Education (base: <8grade)							
8<grade<12	1.98	3.7	0.000	0.81	-2.5	0.014	***
HS/GED	1.63	2.8	0.006	0.75	-3.8	0.000	***
Some college	1.96	3.7	0.000	0.74	-3.8	0.000	***
College or more	1.62	2.6	0.008	0.60	-6.4	0.000	***
Mother's partner type (Base: No partner)							
Exogamous partner	1.68	4.8	0.000	0.75	-3.8	0.000	***
Endogamous partner	1.04	0.5	0.625	0.95	-1.4	0.178	
R living with both bio parents at w1	1.10	1.1	0.259	1.09	2.3	0.022	
R's total number of siblings at t1	0.94	-2.0	0.048	1.02	1.6	0.117	**
Proportion of tract is same race	0.19	-10.5	0.000	1.55	6.0	0.000	***
Affectives ties to mother							
Log liklihood				-25389.8			

NOTES: Model controls for region of residence at t1

***<.01; **<.05; *<.10

Table 2-4. Parameters from multinomial logistic regression model predicting entry into exogamous or endogamous marriage vs. remaining single (N=136,152 pyrs)

	Model 3 (Model 2 + Relationship to mother)						exog ≠ endog
	Exog			Endog			
	O.R.	Z-score	p-value	O.R.	Z-score	p-value	
Respondent's Traits							
Race (base: White)							
Black	0.29	-8.9	0.000	0.31	-21.4	0.000	
Asian	0.75	-1.6	0.117	0.51	-7.2	0.000	**
Hispanic	0.97	-0.2	0.830	0.60	-7.2	0.000	***
Child of immigrants	0.90	-1.0	0.324	1.15	2.6	0.009	**
Female	1.12	1.6	0.103	1.31	8.8	0.000	**
Age[1]	3.19	9.4	0.000	3.89	24.5	0.000	
Age squared[1]	0.98	-8.6	0.000	0.97	-22.7	0.000	*
Religious attendance[1] (base: Never/no religion)							
<1/month	1.18	1.9	0.064	1.29	6.1	0.000	
>1/month but <1/wk	1.33	2.7	0.006	1.56	9.5	0.000	
>=1/week	1.36	3.1	0.002	2.07	16.4	0.000	***
Parent	2.65	10.8	0.000	2.48	21.5	0.000	
Education[1] (Base: no HS)							
HS	1.18	1.7	0.092	1.24	4.9	0.000	
Some college	1.30	2.3	0.023	1.27	4.6	0.000	
BA+	1.60	3.8	0.000	1.89	11.4	0.000	
Labor Force Status[1] (Base: Not employed)							
Part-time	0.88	-1.1	0.266	0.94	-1.1	0.268	
Full-time	1.30	2.5	0.012	1.32	5.7	0.000	
Moved to another state[1]	2.10	6.8	0.000	1.50	7.7	0.000	***
Mother's and Household's traits							
Mom's age[1] (base: 25-49)							
50+	0.88	-1.8	0.079	0.80	-6.6	0.000	
Mother died since wave 1	0.89	-0.5	0.652	0.90	-0.9	0.377	
Education (base: <8grade)							
8<grade<12	1.98	3.7	0.000	0.81	-2.5	0.013	***
HS/GED	1.63	2.8	0.005	0.74	-3.8	0.000	***
Some college	1.96	3.7	0.000	0.74	-3.8	0.000	***
College or more	1.62	2.6	0.008	0.60	-6.4	0.000	***
Mother's partner type (Base: No partner)							
Exogamous partner	1.69	4.8	0.000	0.75	-3.8	0.000	***
Endogamous partner	1.04	0.5	0.633	0.95	-1.3	0.196	
R living with both bio parents at w1	1.10	1.2	0.251	1.09	2.2	0.025	
R's total number of siblings at t1	0.94	-2.0	0.045	1.02	1.6	0.101	**
Proportion of tract is same race	0.19	-10.5	0.000	1.55	5.9	0.000	***
Affectives ties to mother	0.87	-0.5	0.587	1.27	1.9	0.062	
Log liklihood			-25387.6				

NOTES: Model controls for region of residence at t1

***<.01; **<.05; *<.10

Table 2-5. Parameters from multinomial logistic regression model predicting entry into exogamous or endogamous marriage vs. remaining single by mother-child relationship (N=136,152 pyrs)

	O.R.	Z-score	p-value	O.R.	Z-score	p-value	Test for exog≠endog
	Full model*						
	Outcome=Exogamy			**Outcome=Endogamy**			
Emotional Support at t1							
Affective ties to mother	0.00	-13.16	0.000	1.27	1.87	0.062	0.174
Mother encourages independence	0.95	-1.46	0.145	1.02	1.09	0.275	0.069
Frequency of interaction with mother	1.03	0.77	0.439	0.98	-1.45	0.146	0.187
Talks to mother about personal problem	1.02	0.31	0.758	1.10	2.99	0.003	0.334
Talks to mother about dates/parties	1.16	2.16	0.030	1.26	7.51	0.000	0.254
Family Belonging	0.70	-2.23	0.026	1.34	3.83	0.000	0.000
Conflict with mom at t1							
Argue with mom	1.03	0.45	0.653	0.89	-3.56	0.000	0.050
Mom did not explain why something was wrong	1.03	0.90	0.367	0.95	-2.74	0.006	0.041

*Full model is Model 3 from Table 4: All models control for: respondent's race/ethnicity, immigrant status, gender, age, religious attendance at W1, parental status, education, labor force status and whether the respondent moved across state borders before marriage. In addition, all models also control for mothers' traits, including mother's age (if alive), education, and whether she was in an endogamous/exogamous union at w1 (if partnered at all). Household traits include whether the respondent lived with both biological parents at W1, number of coresident siblings at W1 and the percent same-ethnicity in the respondent's home tract at W1. Region of residence (West, East, MidWest and South) was also included in the model.

Table 2-6. Respondent's race by partner's race (married respondents only)

| | Partner's Race | | | | |
Respondent's Race	White, Non-Hispanic	Black, Non-Hispanic	Asian, Non-Hispanic	Hispanic	Total
White, Non-Hispanic	3,647	53	61	215	3,976
Black, Non-Hispanic	65	692	7	56	820
Asian, Non-Hispanic	63	7	210	23	303
Hispanic	237	35	31	740	1,043
Total	4,012	787	309	1,034	6,142

Table 2-7A. Affective Ties to Mothers: Comparing Goodness of Fit (N=6,142)

Model	LL	G2	df	p	BIC
0 Saturated Model: XYZ	-89.2	0.0	0	1.000	0.0
1 No three way interaction: XY, XZ, YZ	-95.5	12.7	9	0.177	-65.8
2 Endog: XY, XZ, YZ, Endog*Z	-94.4	10.5	8	0.232	-59.3

NOTE: For Tables 2-7A through 2-7H: x=Respondent's race, y= Partner's race, z= parent-child relationship
df= difference in number of coefficients between saturated model and current model

Table 2-7B. Mother Encourages Independence: Comparing Goodness of Fit (N=6,142)

Model	LL	G2	df	p	BIC
0 Saturated Model: XYZ	-89.9	0.0	0	1.000	0.0
1 No three way interaction: XY, XZ, YZ	-94.8	9.9	9	0.359	-68.6
2 Endog: XY, XZ, YZ, Endog*Z	-94.8	9.9	8	0.272	-59.9

Table 2-7C. Frequency of Interaction with Mother: Comparing Goodness of Fit (N=6,142)

Model	LL	G2	df	p	BIC
0 Saturated Model: XYZ	-90.3	0.0	0	1.000	0.0
1 No three way interaction: XY, XZ, YZ	-95.3	10.0	9	0.350	-68.5
2 Endog: XY, XZ, YZ, Endog*Z	-94.9	9.2	8	0.326	-60.5

Table 2-7D. Discuss Personal Problem with Mother: Comparing Goodness of Fit (N=6,142)

Model	LL	G2	df	p	BIC
0 Saturated Model: XYZ	-89.7	0.0	0	1.000	0.0
1 No three way interaction: XY, XZ, YZ	-92.6	5.9	9	0.750	-72.6
2 Endog: XY, XZ, YZ, Endog*Z	-92.6	5.8	8	0.670	-64.0

Table 2-7E. Discuss Date/Parties with Mother: Comparing Goodness of Fit (N=6,142)

Model	LL	G2	df	p	BIC
0 Saturated Model: XYZ	-90.1	0.0	0	1.000	0.0
1 No three way interaction: XY, XZ, YZ	-92.6	5.0	9	0.834	-73.5
2 Endog: XY, XZ, YZ, Endog*Z	-92.6	5.0	8	0.758	-64.8

Table 2-7F. Family Belonging: Comparing Goodness of Fit (N=6,142)

Model	LL	G2	df	p	BIC
0 Saturated Model: XYZ	-90.2	0.0	0	1.000	0.0
1 No three way interaction: XY, XZ, YZ	-99.1	17.9	9	0.036	-60.6
2 Endog: XY, XZ, YZ, Endog*Z	-93.6	6.9	8	0.547	-62.9

Table 2-7G. Argue with mother: Comparing Goodness of Fit (N=6,142)

Model	LL	G2	df	p	BIC
0 Saturated Model: XYZ	-89.6	0.0	0	1.000	0.0
1 No three way interaction: XY, XZ, YZ	-95.7	12.1	9	0.208	-66.4
2 Endog: XY, XZ, YZ, Endog*Z	-92.5	5.8	8	0.670	-64.0

Table 2-7H. No conflict resolution: Comparing Goodness of Fit (N=6,142)

Model	LL	G2	df	p	BIC
0 Saturated Model: XYZ	-79.8	0.0	1	1.000	0.0
1 No three way interaction: XY, XZ, YZ	-83.7	7.9	8	0.443	-61.9
2 Endog: XY, XZ, YZ, Endog*Z	-82.7	5.8	7	0.563	-55.3

Table 2-8. Odds ratios from log linear models where best fit models include interactions between family relationship and union type

	R Has Strong Family belonging vs. Not	R Argued with Mother vs. Not
Among Whites:		
Odds of marrying Endogamously vs. Exogamously if …	1.50	0.63
Among Blacks:		
Odds of marrying Endogamously vs. Exogamously if …	1.11	1.05
Among Asians:		
Odds of marrying Endogamously vs. Exogamously if …	1.49	0.81
Among Latinos:		
Odds of marrying Endogamously vs. Exogamously if …	1.32	0.74

APPENDIX TABLES

Appendix Table 2-1. AddHealth sample traits by wave				
	Wave 1	Wave 2	Wave 3	Wave 4
Female	50.5	51.2	52.7	53.3
	10,480	7,546	8,005	8,169
Race				
White	50.4	51.4	51.8	53.0
	10,455	7,573	7,864	8,120
Black	20.8	20.3	20.3	20.6
	4,320	2,991	3,079	3,150
American Indian	0.6	0.6	0.6	0.5
	115	87	83	70
Asian	6.3	6.1	6.6	5.4
	1,314	891	996	823
Other	0.9	0.8	0.8	0.8
	192	120	121	123
Mixed	3.9	3.9	3.7	3.8
	803	576	569	583
Hispanic	17.0	16.9	16.1	15.9
	3,525	2,487	2,447	2,434
Missing	0.1	0.1	0.3	0.1
	21	13	38	12
Immigrant Generation				
1G	9.2	8.4	8.1	7.6
	1,903	1,241	1,234	1,160
2G	14.0	14.0	14.0	13.4
	2,907	2,062	2,132	2,045
3G	76.5	77.3	77.4	78.8
	15,860	11,398	11,755	12,067
Missing	0.4	0.3	0.5	0.3
	75	37	76	43
Married	0.3	0.8	17.0	43.4
	71	113	2,584	6,639
Total	**20,745**	**14,738**	**15,197**	**15,315**

Appendix Table 2-2. Correlations between mother-child relationship measures*

	Affective ties to mother	Mother encourages indep.	Interaction with mother	Talk abt. personal problem w/mother	Talk abt. dates/parties w/mother	Family belonging	Argue with mother	Mom did not explain why something was wrong
Affective ties to mother	1.00							
Mother encourages indep.	0.37	1.00						
Interaction with mother	0.23	0.14	1.00					
Talk abt. personal problem	0.13	0.10	0.15	1.00				
Talk abt. dates/parties w/mother	0.09	0.08	0.08	0.31	1.00			
Family belonging	0.51	0.29	0.26	0.06	0.01	1.00		
Argue with mother	-0.17	-0.11	0.01	0.16	0.14	-0.23	1.00	
Mom did not explain why something was	-0.49	-0.41	-0.21	-0.15	-0.08	-0.42	0.11	1.00

*All correlations statisitically significant at p<.001

Appendix Table 2-3. Descriptive traits (person-years)*

	Percent/ Mean	S.D.		Percent/ Mean	S.D.
Respondent's traits			***Household's traits***		
Union type[1]			R living with both bio parents at w1	62.6	
Unmarried	95.4		R's total number of siblings at t1	1.5	1.2
Exog	0.7		Non-English at home at t1	6.7	
Endog	4.0		Prop. same race.ethnic group in tract at t1	0.8	0.3
Race/Ethnicity			***Affective ties to mother (t1)***		
Non-Hispanic White	67.8		Emotional ties to mother scale[2]	0.9	0.1
Non-Hispanic Black	16.7		Mother encourages independence		
Non-Hispanic Asian	3.4		Strongly disagree	1.0	
Hispanic	12.1		Disagree	4.0	
Bio Child of immigrants	15.0		Neither	11.8	
Female	47.7		Agree	42.3	
Age[1]	22.0	3.8	Strongly agree	40.8	
Religious service attendance[1]			***Interaction with mother (t1)***		
Never/no religion	28.0		Frequency of interaction with mother index[3]		
<1/month	27.1		0 (no activities)	14.0	
>1/month but <1/wk	17.8		1	34.9	
>=1/week	27.2		2	31.5	
Parent[1]	14.5		3	13.9	
Education[1]			4	4.7	
No HS	32.3		5 (all activities)	0.9	
HS	38.3		***Level of communication with mothers***		
Some college	15.4		R talks to mother about personal problem	36.6	
BA+	14.0		R talkes to mother about dates/parties	45.2	
Labor Force Status[1]			***Control and Conflict***		
Not employed	16.1		R argued with mother	33.9	
Part-time	30.1		R's mother explains why something is wrong		
Full-time	53.8		Strongly disagree	1.4	
Moved to another state[1]	6.0		Disagree	5.6	
Mother's and Household's traits			Neither	11.5	
Mother's age[1]			Agree	46.4	
Mother died since wave 1	1.4		Strongly agree	35.3	
25-49	65.0		***Family relationships (t1)***		
50+	33.6		Family belonging scale[4]	0.7	0.2
Education			***Controls***		
<8grade	4.4		Region of residence at t1	16.3	
8<grade<12	11.2		West	32.0	
HS/GED	37.0		Midwest	36.7	
Some college	20.6		South	15.0	
College or more	26.8		Northeast		
Mother's partner status at t1					
No partner	30.8				
Different race/ethnic partner	5.9				
Same race/ethnic partner	63.4				
Unweighted N			**136,152**		

*Percentages and means are weighted. Percentages may not equal 100 due to rounding.
[1] Time-changing variable [2] Respondents were asked to report on 1) how emotionally close they were to their mother, 2) whether they felt that their mother cared about them, and 3) whether their mother was warm and loving toward them. Responses ranged from 1 to 5. These items were grouped together and re-scaled to range from 0 to 1, where 0 indicates a weak relationship to mothers and 1 indicates a strong relationship to mothers. [3] Respondents reported on the amount of whether they did the following with mothers in past week: shopping, playing a sport, going to church, going to a movie/museum/other cultural event, worked on a school project. These items were added together (0=no activities, 5=all activities). [4] The respondent was asked to rate the degree to which they believed their family understood them, whether they had fun with their family, and whether their family paid attention to them. Responses ranged from 1 to 5 (1: Not at all to 5: Very much). These items were combined into a factor-based scale and re-scaled to range from 0 to 1.

Appendix Table 2-4.1. Parameters from preferred model of no three-way interaction for affective ties to mother

	b	s.e.	p-value
Race (Base: WH)			
BL	-4.34	0.18	0.000
AS	-3.89	0.17	0.000
HS	-2.72	0.10	0.000
Parnter's race			
BL	-3.98	0.17	0.000
AS	-3.83	0.17	0.000
HS	-2.81	0.10	0.000
Respondent's Race*Partner's Race			
BL*BL	6.63	0.19	0.000
BL*AS	1.90	0.42	0.000
BL*HS	2.68	0.20	0.000
AS*BL	2.01	0.42	0.000
AS*AS	5.27	0.19	0.000
AS*HS	1.82	0.25	0.000
HS*BL	2.32	0.23	0.000
HS*AS	2.06	0.23	0.000
HS*HS	3.97	0.10	0.000
Strong affective ties	0.92	0.04	0.000
R BL*Strong affective ties	0.42	0.16	0.010
R AS*strong affective ties	-0.25	0.17	0.145
R HS*strong affective ties	-0.02	0.10	0.846
Partner BL*Strong affective ties	-0.37	0.16	0.024
Partner AS*strong affective ties	-0.39	0.17	0.020
Partner HS*strong affective ties	-0.02	0.10	0.817
Constant	6.94	0.03	0.000
Log liklihood		-95.5	

Appendix Table 2-4.2. Parameters from preferred model of no three-way interaction for mother encourages independence

	b	s.e.	p-value
Race (Base: WH)			
BL	-4.21	0.15	0.000
AS	-4.06	0.14	0.000
HS	-2.64	0.08	0.000
Parnter's race			
BL	-4.23	0.15	0.000
AS	-3.98	0.14	0.000
HS	-2.86	0.08	0.000
Respondent's Race*Partner's Race			
BL*BL	6.60	0.19	0.000
BL*AS	1.89	0.42	0.000
BL*HS	2.68	0.20	0.000
AS*BL	2.03	0.42	0.000
AS*AS	5.29	0.19	0.000
AS*HS	1.82	0.25	0.000
HS*BL	2.32	0.23	0.000
HS*AS	2.04	0.23	0.000
HS*HS	3.97	0.10	0.000
Mom encourages independence	-0.38	0.03	0.000
R BL*Mom indep	0.41	0.15	0.005
R AS*Mom indep	0.00	0.17	0.977
R HS*Mom indep	-0.26	0.10	0.008
Partner BL*Mom indep	-0.01	0.15	0.934
Partner AS*Mom indep	-0.31	0.17	0.064
Partner HS*Mom indep	0.06	0.10	0.523
Constant	7.68	0.02	0.000
Log liklihood		-94.8	

Appendix Table 2-4.3. Parameters from preferred model of no three-way interaction for interaction with mother

	b	s.e.	p-value
Race (Base: WH)			
BL	-4.16	-27.70	0.000
AS	-4.01	-26.74	0.000
HS	-2.64	-32.84	0.000
Parnter's race			
BL	-4.22	-26.83	0.000
AS	-3.99	-26.74	0.000
HS	-2.78	-33.02	0.000
Respondent's Race*Partner's Race			
BL*BL	6.60	34.74	0.000
BL*AS	1.87	4.48	0.000
BL*HS	2.69	13.75	0.000
AS*BL	2.03	4.82	0.000
AS*AS	5.29	27.37	0.000
AS*HS	1.82	7.18	0.000
HS*BL	2.32	10.17	0.000
HS*AS	2.05	8.87	0.000
HS*HS	3.96	38.68	0.000
Interact with mother	0.06	1.87	0.062
R BL*Interact	0.24	1.69	0.091
R AS*Interact	-0.10	-0.63	0.531
R HS*Interact	-0.19	-2.01	0.045
Partner BL*Interact	-0.01	-0.09	0.929
Partner AS*Interact	-0.21	-1.28	0.200
Partner HS*Interact	-0.11	-1.18	0.239
Constant	7.48	317.77	0.000
Log liklihood		-95.3	

Appendix Table 2-4.4. Parameters from preferred model of no three-way interaction for discussing personal problem with mother

	b	s.e.	p-value
Race (Base: WH)			
BL	-4.09	-28.79	0.000
AS	-3.95	-27.96	0.000
HS	-2.70	-34.77	0.000
Parnter's race			
BL	-4.19	-27.78	0.000
AS	-3.98	-27.89	0.000
HS	-2.80	-34.77	0.000
Respondent's Race*Partner's Race			
BL*BL	6.60	34.77	0.000
BL*AS	1.87	4.47	0.000
BL*HS	2.68	13.74	0.000
AS*BL	2.03	4.81	0.000
AS*AS	5.28	27.30	0.000
AS*HS	1.82	7.17	0.000
HS*BL	2.32	10.17	0.000
HS*AS	2.05	8.90	0.000
HS*HS	3.97	38.73	0.000
Discuss Prob with mother	-0.29	-8.82	0.000
R BL*Discuss Prob	0.13	0.90	0.370
R AS*Discuss Prob	-0.26	-1.55	0.121
R HS*Discuss Prob	-0.07	-0.73	0.463
Partner BL*Discuss Prob	-0.10	-0.67	0.503
Partner AS*Discuss Prob	-0.28	-1.69	0.091
Partner HS*Discuss Prob	-0.08	-0.81	0.416
Constant	7.64	352.03	0.000
Log liklihood		-92.6	

Appendix Table 2-4.5. Parameters from preferred model of no three-way interaction for discussing dates/parties with mother

	b	s.e.	p-value
Race (Base: WH)			
BL	-3.86	0.1	0.000
AS	-3.61	0.1	0.000
HS	-2.60	0.1	0.000
Parnter's race			
BL	-4.25	0.2	0.000
AS	-4.01	0.2	0.000
HS	-2.74	0.1	0.000
Respondent's Race*Partner's Race			
BL*BL	6.60	0.2	0.000
BL*AS	1.85	0.4	0.000
BL*HS	2.67	0.2	0.000
AS*BL	2.04	0.4	0.000
AS*AS	5.26	0.2	0.000
AS*HS	1.79	0.3	0.000
HS*BL	2.32	0.2	0.000
HS*AS	2.05	0.2	0.000
HS*HS	3.96	0.1	0.000
Discuss Dates	0.35	0.0	0.000
R BL*Discuss Dates	-0.30	0.1	0.037
R AS*Discuss Dates	-0.95	0.2	0.000
R HS*Discuss Dates	-0.24	0.1	0.011
Partner BL*Discuss Dates	0.04	0.1	0.788
Partner AS*Discuss Dates	-0.14	0.2	0.382
Partner HS*Discuss Dates	-0.16	0.1	0.082
Constant	7.32	0.0	0.000
Log liklihood		-92.6	

Appendix Table 2-4.6. Parameters from preferred model of interaction between union type and family belonging

	b	s.e.	p-value
Race (Base: WH)			
BL	-4.01	-27.2	0.000
AS	-3.78	-26.6	0.000
HS	-2.68	-31.0	0.000
Parnter's race			
BL	-4.05	-26.1	0.000
AS	-4.04	-26.3	0.000
HS	-2.72	-30.9	0.000
Respondent's Race*Partner's Race			
BL*BL	6.36	31.4	0.000
BL*AS	1.73	4.1	0.000
BL*HS	2.56	12.9	0.000
AS*BL	1.90	4.5	0.000
AS*AS	5.08	24.9	0.000
AS*HS	1.71	6.7	0.000
HS*BL	2.20	9.6	0.000
HS*AS	1.93	8.3	0.000
HS*HS	3.72	29.4	0.000
Fam Belonging	-0.24	-3.1	0.002
R BL*Fam Belonging	-0.15	-1.0	0.303
R AS*Fam Belonging	0.14	0.9	0.381
R HS*Fam Belonging	0.02	0.3	0.806
Partner BL*Fam Belonging	0.22	1.5	0.126
Partner AS*Fam Belonging	-0.41	-2.5	0.013
Partner HS*Fam Belonging	0.16	1.7	0.099
Enogamy*Fam Belonging	0.26	3.3	0.001
Constant	7.50	320.1	0.000
Log liklihood		-93.6	

Appendix Table 2-4.7. Parameters from preferred model of interaction between union type and argue with mother

	b	s.e.	p-value
Race (Base: WH)			
BL	-3.99	-29.4	0.000
AS	-4.18	-28.5	0.000
HS	-2.81	-34.8	0.000
Parnter's race			
BL	-4.41	-27.9	0.000
AS	-4.16	-28.5	0.000
HS	-2.87	-34.6	0.000
Respondent's Race*Partner's Race			
BL*BL	6.76	33.8	0.000
BL*AS	1.93	4.6	0.000
BL*HS	2.75	13.9	0.000
AS*BL	2.10	5.0	0.000
AS*AS	5.45	26.8	0.000
AS*HS	1.90	7.4	0.000
HS*BL	2.39	10.4	0.000
HS*AS	2.13	9.2	0.000
HS*HS	4.11	34.9	0.000
Argue with mother	-0.47	-5.9	0.000
R BL*Argue with mother	0.25	1.7	0.097
R AS*Argue with mother	0.00	0.0	0.977
R HS*Argue with mother	-0.10	-1.0	0.318
Partner BL*Argue with mother	-0.32	-2.1	0.033
Partner AS*Argue with mother	0.13	0.8	0.446
Partner HS*Argue with mother	0.01	0.1	0.958
Enogamy*Argue with mother	-0.20	-2.5	0.012
Constant	7.79	383.6	0.000
Log liklihood		-92.5	

Appendix Table 2-4.8. Parameters from preferred model of no three-way interaction for no conflict resolution

	b	s.e.	p-value
Race (Base: WH)			
BL	-3.99	-31.8	0.000
AS	-4.08	-31.4	0.000
HS	-2.74	-40.0	0.000
Parnter's race			
BL	-4.25	-30.2	0.000
AS	-4.11	-31.2	0.000
HS	-2.83	-39.6	0.000
Respondent's Race*Partner's Race			
BL*BL	6.61	34.7	0.000
BL*AS	1.87	4.5	0.000
BL*HS	2.68	13.7	0.000
AS*BL	2.03	4.8	0.000
AS*AS	5.29	27.4	0.000
AS*HS	1.92	7.5	0.000
HS*BL	2.32	10.2	0.000
HS*AS	2.06	8.9	0.000
HS*HS	3.97	38.7	0.000
No Conflict Res with mother	-2.54	-40.8	0.000
R BL*No Conflict Res	0.27	0.9	0.352
R AS*No Conflict Res	0.20	0.7	0.480
R HS*No Conflict Res	0.00	0.0	0.997
Partner BL*No Conflict Res	-0.61	-2.0	0.041
Partner AS*No Conflict Res	0.26	0.9	0.388
Partner HS*No Conflict Res	0.07	0.4	0.674
Constant	8.13	473.1	0.000
Log liklihood		-83.7	

CHAPTER 3: THE EFFECTS OF MARRIAGE AND PARTNER CHOICE ON INTERGENERATIONAL RELATIONSHIPS

Introduction

Population aging has increased the time that individuals spend as mothers, fathers, daughters and sons. In this demographic context, there is growing potential for continuing and deepening intergenerational ties over the life course. Yet intergenerational relationships are influenced by a host of factors, including children's own transitions to marriage and the arrival of new individuals who must also be brought into the family fold.

Marriage is thus a critical turning point for parents and offspring as new and old commitments to family members are renegotiated. Recent evidence suggests that marriage in fact pulls offspring away from parents (Musick and Bumpass 2012; Sarkisian and Gerstel 2008), even though family historians argue that marriage historically strengthened the connection between parents and children (Coontz 2005). Family scholars today argue that modern marriage privileges self-fulfillment and a reliance on partners to fulfill emotional and social needs that did not characterize earlier unions (Giddens 1992; Lesthaege 1995; Slater 1963). An emphasis on couple quality and the time and resources needed to maintain such partnerships has negative consequences for other social ties and especially ties to parents. In this way, modern marriage has been characterized by some scholars as a "greedy" institution (Coser and Coser 1974).

As marriage has increasingly become focused on the couple and the couple's happiness, offspring have also experienced greater freedom in choosing their romantic partners. This followed from children's emerging independence vis-à-vis their parents, which encompassed a decline in parental control and the increased geographic mobility of youth, exposing the latter to new ideas and marriage markets (Goode 1964). The independence of young adults, along with the lifting of major institutional sanctions against interracial unions, is a major force behind rising rates of intermarriage (Rosenfeld and Kim 2005).

Given changing norms and opportunities surrounding marriage and partner choice, this paper asks the following questions. First, how does marriage affect children's ties to parents? And second, how does intermarriage in particular compare to endogamous marriage in shaping intergenerational relationships?

Background

The association between marriage and intergenerational relationships

The bulk of recent empirical research suggests that married individuals have weaker ties to parents than those who are unmarried. However, the results vary greatly depending on how these ties are measured. Married individuals are less likely to coreside with parents than those who are single (Pezzin and Schoene 1999). Married children also tend to have less face-to-face contact as well as less email and phone contact with parents compared to their single counterparts (Bucx et al., 2008; Kalmijn and DeVries 2009; Spitze et al., 1994; Treas and Gubernskaya 2012; Waite and Harrison 1992). In addition, married individuals are less likely to provide parents with practical and instrumental support compared to those who are unmarried (Sarkisian and Gerstel 2008). However, geographic proximity – a measure of potential support when parents are in need - does not differ between unmarried and married offspring who do not coreside with parents (Bianchi, McGarry and Seltzer, 2010; Lawton, Silverstein and Bengston 1994). In addition, married offspring report greater emotional closeness to parents than those who are single (Aquilino 1997).

Despite the greater emotional closeness between generations, it is clear that married offspring spend less time with parents compared to their single counterparts. Researchers attribute several structural factors to explain this difference. Married individuals are more likely to work full-time, to be parents of young children who require attention, and to spend time on

housework than those who are single. However, accounting for these characteristics does not close the gap between married versus single offspring's ties to parents (Sarkisian and Gerstel 2008). In addition, marriage duration has little effect on parent-child contact with evidence suggesting that ties to parents do not "bounce back" after an initial honeymoon stage (Musick and Bumpass 2012). Although few studies control for earlier relationships to parents, those that do continue to find that parent-child relationships are weaker among the married compared to those who are single (Aquilino 1997; Musick and Bumpass 2012).

Does partner choice matter?

In addition to whether children are married, whom children marry may also shape children's ties to parents. Previous research documents how intermarriage increases the racial heterogeneity of kinship networks (Goldstein 1999). However, less is known about how intermarriage versus endogamous marriage influences ties to parents in particular.

In general, exogamous unions tend to be more unstable than endogamous unions. During adolescence, romantic relationships that cross race/ethnic lines are shorter in duration compared to those that do not (Wang et al. 2006). Exogamous relationships are less likely to lead to marriage compared to those that remain within race/ethnic boundaries (D'Souza 2010; Joyner and Kao 2005). Finally, exogamous marriages are more likely to end in divorce than same-race marriages (Bratter and King 2008; Zhang and Van Hook 2009).

Exogamous unions may be more unstable than endogamous unions because they lack family support. Qualitative evidence suggests that couples who are intermarried receive less social support from family members than those in endogamous unions. Interviews with Black-white couples in particular cite disapproving reactions from family, friends, and acquaintances even after marriage (Root, 2001). Family disapproval in turn causes couples to limit their contact

with extended kin (McNamara et al., 1999, Rosenblatt et al., 1995). This may also explain why intermarriages are also more prone to marital stress (Fusco 2010).

For whom does partner choice matter?

The effect of partner choice on maintaining ties to parents may matter more for certain individuals than others. Some evidence for this is provided in Lewis and Yancey's (1995) study of familial support among biracial married couples. They found that African American family members and Hispanic family members were more supportive and accepting of biracial marriages involving members of their own kin, whereas Whites were seen as less supportive of biracial marriages involving their own family members.

Tied to this is the burgeoning research that examines differences in the mental health of individuals in exogamous versus endogamous unions. Recent research finds that individuals in exogamous unions reported higher levels of psychological distress than those in endogamous unions, although these patterns were only robust for White wives married to non-White husbands (Bratter and Eschbach 2006). This result points to potential differences across groups in the ways that families react to intermarriage. In particular, Whites, who lose racial caste privilege when intermarrying, may suffer the consequences of exogamy directly in weakened and more discordant ties to the family of origin compared to other individuals from other race/ethnic groups who intermarry.

Partner choice may also matter more for intergenerational relationships in immigrant families, compared to non-immigrant families. Previous research suggests that immigrant parents have a stronger interest in the endogamous marriages of their offspring than non-immigrants (Foner and Kasinitz 2007; Kalmijn and van Tubergen 2010; Kasinitz et al. 2008; Lee and Bean 2010; Zantvliet, Kalmijn and Verbakel 2012). Although immigrants leave behind the "old

country" to improve their lives and those of their children, there is immense fear and worry of cultural loss that is inherent in the migrant experience. Immigrant parents who are afraid that children are too rapidly 'becoming American' will encourage children to marry someone of the same ethnic or linguistic origin as one way to maintain cultural continuity over generations. Children who do intermarry may thus risk estranging themselves from parents when partners and children (grandchildren) born from that union are not well-versed in the "old country" ways.

Gender may also influence the link between partner choice and ties to parents. On the one hand, as kin keepers, daughters' relationships with parents may not be as influenced by who they marry compared to sons'. In studies comparing married to never married individuals, the gap between married and never married daughters' contact with parents was smaller than the gap for sons (Sarkisian and Gerstel 2004; Sarkisian and Gerstel 2008). It may be that women's ties to parents are simply more resilient over the life course (Merrill 2011) and by extension – the strength of these relationships may also depend less on who daughters choose to marry. Yet on the other hand, given women's responsibilities towards parents and expectations of socializing the next generation, women who form unions with partners outside of their own race-ethnic group may have weaker ties to parents than those who marry same-race partners.

Does spouse's specific race matter?

Likewise, the effect of exogamous unions on intergenerational relationships may depend entirely on the race/ethnicity of the partner. Marrying someone of a stigmatized race/ethnic group may be more detrimental to parent-child relationships than marrying someone from a non-stigmatized group. Previous research suggests that intermarriage with African Americans in particular negatively affects parent-child relationships. Although the majority of these studies were conducted among Black-White couples, interviews with Asians and Latinos also suggest

119

strong parental disapproval of marrying African Americans (Lee and Bean 2010; Lewis and Yancey 1995). As one young woman with a Mexican-American father and White mother noted: "I was never brought up to hate or dislike black people, but if I dated a black man, my white side of the family and Mexican side of the family would disown me. They've made that very clear…Never said anything about any Asians or Indians or Pakistani, nothing. As long as he wasn't black" (Lee and Bean 2010, pg. 93).

Intermarriage with Whites, on the other hand, may be associated with upward mobility and access to racial privilege. Lee and Bean's interviews with children of immigrants, for example, lay out the racial hierarchy of parental preferences. Parents of Latinos and Asians raised little to no objections when children proposed to marry Whites, in part because Whites were seen as culturally different but not racially distinct (2010). In an interview with a White-Asian couple, the Asian wife claimed that her father warned her about marrying someone from a different "culture," but was blunt in his objections to *interracial* marriages, which he defined as marriage with Blacks (Lee and Bean 2010, pg. 92). Thus, intermarriage with Whites appears to be the lesser of two evils for parents of some ethnic minority groups.

Research Questions

This paper extends previous research on the link between offspring's marriage and intergenerational relationships in two important ways. First, unlike previous research, I explore not only how children's marriage is associated with ties to parents, but explicitly ask how children's union type – whether the respondent marries exogamously or endogamously – affects ties to parents. Increasing race/ethnic heterogeneity in the United States has lead to a rise in intermarriage, yet we know little about how intermarriage affects ties to the family of origin.

Second, unlike the majority of previous research, I also include controls for respondents' relationships with parents prior to marriage. Previous research suggests continuity in intergenerational relationships over the life course such that parent-child relationships during adolescence are largely predictive of intergenerational ties in adulthood (Aquilino 1997). In addition, strong parent-child relationships lead to early marriage (Thornton, Axinn and Xie, 2000) and certain aspects of parent-child relationships may also select individuals into endogamous rather than exogamous unions (see Chapter 2). In the analysis that follows, respondents' relationships with mothers during adolescence are included as controls so that the effects of marriage and intermarriage on parent-child relationships in young adulthood can be conceptually separated from earlier parent-child relationships that may have lead to marriage and intermarriage in the first place.

My first research question thus asks whether married offspring have weaker ties to parents than the unmarried. Second, I ask whether having a partner of a different race/ethnicity negatively affects parent-child relationships compared to those who marry within race/ethnic lines. Third, I ask whether exogamous unions are more detrimental for Whites, who stand to lose race/caste privilege when intermarrying; for the children of immigrants, who face greater pressure from parents to marry within race/ethnic boundaries; and for daughters, whose intermarriage may disrupt expectations of greater responsibilities towards parents than sons. Finally, I ask whether the effect of intermarriage depends on the specific race/ethnicity of the partner. Extending previous research, I anticipate that intermarriage with African Americans will negatively affect intergenerational ties compared to marrying partners of other race/ethnic groups. On the other hand, it is unlikely that parental reaction to offspring's' intermarriage with

Whites will be particularly strong compared to non-white marriages. Thus, I do not anticipate any effect of marriage to a white partner on non-white offspring's' ties to parents.

Data

To address these questions, this project uses data from the National Longitudinal Study of Adolescent Health (AddHealth). AddHealth is a longitudinal study of a nationally representative sample of adolescents in grades 7-12 in the United States during the 1994-95 school year. In this first survey wave, the average respondent was aged 16. The Add Health cohort has since been followed into young adulthood with three additional in-home interviews in 1996, 2002 and in 2008/9, when the average respondent was aged 29. The first wave consisted of approximately 20,745 adolescents including oversamples of African American respondents from well-educated families, Chinese- Cuban- and Puerto-Rican- origin adolescents as well as sibling pairs and respondents included for the genetic oversample. Sibling (half-sibling, twin) pairs and respondents in the genetic oversample were not assigned weights and in the analysis that follows, I exclude all individuals without weights at Wave 1 in order to increase the representativeness of the data (Chantala 2006). In 1996, 14,738 respondents were interviewed, 15,197 were interviewed up in the third wave and 15,315 were interviewed in the fourth wave. Barring the respondent's death and ineligibility in previous waves, interviews with the original respondents were attempted at each wave, even if the respondent was not interviewed in the previous wave. However, eligibility rules did differ slightly across waves.[26]

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[26] In wave 2, respondents who were in the 12th grade at Wave I and/or who were not part of the genetic/twin sample (the majority) were not re-interviewed because they exceeded age eligibility restrictions. In addition, respondents who were only in the Wave I disabled sample were not re-interviewed. In wave 3, individuals who were out of the country permanently or on active military duty were not re-interviewed. In wave 4, individuals who were on active-duty military and those who were out of the country permanently were ineligible for follow-up. In addition, 52 respondents, ages 33-34, were not included in Wave IV because they exceeded the targeted age range.

Comparisons between Waves 1 and 4 suggest that Hispanics were less likely to be represented at later waves than individuals in other race/ethnic groups. In addition, first-generation respondents were also less likely to be in the sample at Wave 4 compared to second-generation immigrants or third-generation natives. One reason may be because respondents who had left the country permanently (which may affect first-generation respondents and Hispanics disproportionally) were not interviewed in Waves 2, 3 or 4. In addition, those who were unable to complete the interview because of language difficulties were not interviewed at follow-up waves (Brownstein et al. 2010; Chantala et al.).

Add Health combines longitudinal survey data on respondents' social, economic, psychological and physical well-being with contextual data on parents, families, neighborhood, and romantic relationships. In this way, the data provide a unique opportunity to track individuals during and following adolescence, a critical period in the life course. Crucial for this study is that a complete roster of all relationships that the respondent ever had was collected at Wave 4. The respondent was asked to designate the start and end of these relationships, whether the relationship was still current and whether the relationship was a dating, pregnancy (without cohabiting or marriage), cohabiting or married relationship. In addition, the sex, race/ethnicity and age of each partner were asked.

Measures

Intergenerational Relationships

Another important aspect of the AddHealth data is that several questions about the respondent's relationship to mothers, fathers and the family were assessed at each survey wave, although the questions varied greatly across waves. In this study, I only include respondents' relationships with biological mothers whom they reported living with at Wave 1. Part of this

decision was made because of the relative ease of tracing biological, compared to non-biological relationships over time.[27] However, step-mothers comprised less than 3% of all residential mothers at Wave 1.

In this study, I use four measures of mother-child relationships that capture normatively strong parent-child relationships during young adulthood. These include emotional closeness to mothers, contact with mothers and geographic proximity to mothers. Each of these measures can also be framed within Bengtson and Roberts' broader schema on intergenerational ties (1991). Emotional closeness is one measure of affectual solidarity, or the degree to which individuals have positive sentiments about their families (warmth, closeness, etc.). In the AddHealth survey, respondents are asked to report on how close s/he feels to her/his mother and answers range from *not at all* (1) to *very close* (5).

Next, respondents were asked to report on how far they lived from their mother. This broadly captures one aspect of structural solidarity, which reflects the opportunity for maintaining ties that is based on spatial arrangements. Respondents ranged in their response from either *living less than 10 miles away* (1) to living *more than 200 miles away* (6). Coresidence, also a measure of parent-child ties, is excluded from this analysis because at this life stage parents expect children to have left home (Furstenburg et al. 2004). In particular, coresidence with parents after marriage may not be indicative of positive parent-child relationships but may instead capture unusual parental or offspring need. Thus, respondents who coreside with mothers at Wave 4 are excluded from this analysis (n=2,199 or 19% of the sample).

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[27] AddHealth changed the referent for parents across survey waves making it virtually impossible to follow step-mother relationships across waves.

Finally, associational solidarity, which emphasizes frequency of contact and activities between family members, is broadly reflected in two measures used here. The first measure asks respondents how often they visit their mother and the second measure asks respondents how often they talk on the telephone, exchange emails or letters with their mothers. Answers range from *never* (0) to *almost daily* (5). Respondents who currently reside with a mother are not asked these questions and are therefore excluded from the analysis that estimates these outcome measures (n=2,199 or 19% of the sample).

Union Type

In this study, I consider first marriages only, as the vast majority (>95%) of respondents have only been married once. These are young marriages given that the average respondent is aged 29 at Wave 4.[28] Individuals are assigned values depending on whether they 1) endogamously marry, 2) exogamously marry, 3) or remain single. Individuals who marry within the same race/ethnic group include those who marry within the broad race/ethnic categories of non-Hispanic White, non-Hispanic Black, Asian, and Hispanic. Mixed race individuals were asked to report the race/ethnicity they most closely identified with and were classified in that group. Individuals who identified solely as American Indian or Other (or were mixed race but also identified these groups as that with which they most closely identified) were dropped from the analysis. Individuals who marry across race/ethnic lines must marry someone who differs from their own classification on this variable. The literature on intermarriage among second-generation immigrants finds that these pan-ethnic categories are indeed meaningful as high rates of marriage within these categories but across national origin lines are quite frequent (Wang

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[28] The number of exogamous marriages represented in the sample may therefore be quite small given previous research suggesting a later age at marriage among exogamous unions (Lichter 1990).

2012; Waters 2005 p.110).[29] In addition to union type, the duration of the relationship is also included in the analysis that compares exogamous to endogamous unions. Relationship length is the total number of years a respondent has been married to his/her spouse.

Other Independent Variables

Other independent variables of interest are the respondent's race/ethnicity, immigrant status, and gender. As stated earlier, respondents are categorized into four broad race/ethnic categories: non-Hispanic White, non-Hispanic Black, non-Hispanic Asian and Pacific Islander, and Hispanic (of any race). I use measures of race taken from in the "in-home" questionnaire, although many of the students also completed race measures in an "at-school" questionnaire. Previous research that matched students' responses found inconsistent racial identities for approximately 12% of the respondents (Harris and Sim 2002, pg. 619). The largest category consisted of students who reported being multiracial at school, but monoracial at home (5%). In this study, I consider the respondent's racial categories as fixed, but realize that adolescents may in fact think of their own race/ethnic identity in more fluid terms.[30]

Respondent's immigrant status is assigned to two categories: 1) foreign-born respondents and native-born respondents with at least one foreign-born parent are categorized as children of immigrants, 2) native-born individuals with both native-born parents are classified as children of natives. A handful of respondents are native born with one native-born parent, but no information on a mother's and/or father's birthplace (usually father) is provided. For this handful

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[29] In addition to examining how race/ethnic exogamy may affect ties to parents, I also explored whether a large (>2 years) age difference between partners mattered for parent-child relations. It did not.

[30] I plan to conduct additional analyses to assess whether the respondent's race/ethnic identification taken from the school survey changes the main results reported here. Respondents who report multiple race/ethnic identities may not be categorized as marrying exogamously if a more nuanced approach to understanding their race/ethnicity is taken into account.

of individuals (5%) I assign them to the category of children of natives. Although further distinguishing between respondents who were ethnic/racial minorities and children of immigrants would have been fruitful, small sample sizes of immigrants among Whites and Blacks and children of natives among Asians limit this type of analysis. I also include the respondent's age, whether or not they regularly attended religious service at Wave 1, whether the respondent was a parent at Wave 4, the respondent's educational attainment at Wave 4 (no high school, high school, some college, and college or more) and labor force status at Wave 4.

In addition to the respondent's characteristics, I also consider mother and household traits at Wave 1, when respondents were between the ages of 12 and 21. I include mother's age, educational attainment, and mother's union type (endogamous, exogamous union or no union). Variables were also included to indicate whether the respondent was living with both biological parents at Wave 1, and the number of siblings living with the respondent at Wave 1. Finally, U.S. region of residence at Wave 1 (West, East, South, Mid-west) was also included as a survey design control.

Finally, I also include parent-child relationships during the respondent's adolescence. At Wave 1, respondents were asked questions regarding emotional support from mothers. I include measures of emotional closeness to mothers, interaction and communication with mothers. In addition, I include a general measure of family belonging, which captures the degree to which the respondent believes their family understands them, whether they have fun with their family, and whether their family pays attention to them. Emotional support measures are coded so that higher scores indicated stronger support. Finally, I also include respondents' reports about conflict and conflict resolution with mothers. Conflict measures were coded such that higher scores reflect greater conflict with mothers.

Method

In this analysis, I assess each measure of intergenerational relationships with mothers separately: emotional closeness, geographic proximity, face-to-face contact, and phone/email contact. Although the outcome measures lend themselves well to ordered response models, additional tests (not shown here) suggest that the parallel regression assumption is violated for each measure and therefore ordered response models are inappropriate. Instead, I use multinomial logistic regression models and combine the categories so that the results are more interpretable. For each outcome measure, I re-categorize the responses into three groups which theoretically capture the range of possible responses, although several variations of cut points and category groupings were originally estimated. For emotional closeness, the categories are re-grouped so that individuals report being *less than somewhat close, quite close*, and *very close* to mothers. For geographic distance, responses are re-categorized so that individuals live *more than 50 miles away*, *11-50 miles away*, or *within 10 miles* of mothers. Finally, for both measures of contact, respondents are in contact with mothers *less than weekly, weekly* or *daily*.

I first begin by describing the sample. Second, I examine whether children's marital status, regardless of whom they marry, is associated with weaker ties to mothers compared to those who are unmarried. Next, I explore a similar question but instead ask how exogamous unions differ from endogamous marriages in explaining children's relationships to mothers. Here I limit the analysis to married children only. I follow this with a series of tests that explore whether the relationship between partner choice and mother-child ties varies by the respondent's race/ethnicity, immigrant status and gender as originally hypothesized. Finally, I examine whether partner's specific race is associated with parent-child relationships. I predict that

intermarriage with Blacks will lead to weaker intergenerational ties, whereas intermarriage with Whites will have little effect on mother-child ties.

Sample Description

I use data from respondents who were interviewed in Wave 1 and re-interviewed in Wave 4 only (N=15,315). Only individuals who reported living with a biological mother at Wave 1 and reported that their biological mother was their main mother "figure" were included in the sample. Respondents who are already married at Wave 1 are also excluded from the sample. I likewise only included individuals who were single or in heterosexual first marriages at Wave 4. Individuals who have missing values on any of the outcome measures and who were not assigned weights in the AddHealth data are likewise removed from the analysis. These exclusions produce an analytical sample of 11,759 respondents. Respondents who coreside with mothers at Wave 4 (n=2,199) were included in the analysis of emotional closeness, but were excluded from the analysis of geographic proximity, visits, and contact to mothers. Respondents were not asked about visits and contact if they lived with mothers. The analysis of geographic proximity does not include those who are coreside because coresidence is more than just a limiting case of living nearby. Prior research suggests that factors associated with coresidence differ from factors related to living close to, but not with, parents (Compton and Pollak 2009). For this chapter, I leave aside the question of coresidence for future research.

Approximately 4% of the sample respondents had at least one missing value on the explanatory variables described above. I use multiple imputation procedures in Stata (-ICE-) to address the problem of missing data. All analyses are performed in Stata 12.

Table 3-1 presents descriptive characteristics of the weighted sample. Approximately 39% of respondents had married and were still married to their first spouse at Wave 4. Of those

who were married, 15% had entered into exogamous unions and the remaining 85% were married to same-race or same-ethnicity partners. The majority of the sample is White (70%), with African Americans (14%) and Hispanics (12%) also contributing a significant share to the sample. Approximately 15% of respondents are the children of immigrants. The sample is evenly divided between men and women, and 46% of respondents are parents by Wave 4. The average respondent was age 29 when Wave 4 data were collected. Three-quarters of respondents had completed some college education by Wave 4.

INSERT TABLE 3-1 HERE

At Wave 4, mothers were on average slightly older than age 50, and in contrast to their children, less than 50% had completed some college education, reflecting cohort differences in educational attainment. The majority of mothers reported having same-race partners at Wave 1. For respondents, sibship sizes tend to be small with the majority reporting 1-2 siblings.

The vast majority of respondents reported receiving strong emotional support from mothers during adolescence. On average, most respondents reported close emotional ties to mothers at Wave 1, and the vast majority agreed or strongly agreed that mothers encouraged their independence (83%). The majority of respondents reported having few interactions with mothers during adolescence, although over one-third reported discussing a personal problem with mothers and almost 50% reported talking to mothers about dates/parties. Approximately one-third of respondents reported arguing with mothers during adolescence, but a clear majority (82%) reported good conflict resolution with mothers.

At Wave 4, the vast majority of respondents reported strong affective ties to mothers, with 88% saying they were either "quite a bit" or "very close" to mothers. With respect to distance, of those not living with mothers, approximately 63% reported living within 50 miles of

mothers. Among offspring not coresiding with mothers, 19% reported meeting their mothers on a daily basis and 46% reporting talking to their mothers on a daily basis.

Results

Q1: How does union type affect offspring's' ties to mothers?

Table 3-2 presents step-wise multinomial logistic regression models predicting emotional closeness to mothers at Wave 4. Model 1 presents results when children's traits are included; Model 2 includes mother's and household's traits and Model 3 presents results when the respondent's earlier relationship with mothers during adolescence is also taken into account. The results from Model1 show that married offspring are more likely to report being very close rather than not close to mothers compared to those who are unmarried (O.R.=1.29, p-value=.000). The respondent's race/ethnicity is also associated with emotional closeness to mothers. In general, Black and Hispanic respondents are more likely than White respondents to have very close emotional ties to mothers, whereas Asians are less likely than Whites to report very close versus not close emotional ties. Being a parent is associated with less emotional closeness to mothers compared to those who are not parents, but higher levels of education and working full time are associated with a greater likelihood of being very emotionally close to mothers. Model 2 includes mothers' traits but the results for children's traits, including offspring's marital status, remain the same. With increased levels of mother's education, respondents report being less emotionally close, although having been raised by both biological parents tends to increase the likelihood of reporting very close ties to mothers. Model 3 includes earlier ties to mothers at Wave 1 and predictably, closer relationships with mothers during adolescence are associated with strong emotional ties to mothers at Wave 4. More importantly, the results for marital status

remain the same: married offspring are still more likely to report being very close to mothers than those who are unmarried even after accounting for ties to mothers during adolescence.

INSERT TABLE 3-2 HERE

Table 3-3 presents results for all outcome measures. The results are based on Model 3 from Table 3-2, although only the odds ratio for marriage – the main independent variable of interest – is presented for each indicator of mother-child ties. With respect to geographic proximity, married offspring are more likely than their single counterparts to live within 50 miles of mothers compared to living more than 50 miles away (O.R.=1.15, p-value=.017). In addition, married offspring are 16% less likely than single individuals to visit their mothers daily, but are on the other hand more likely than singles to visit them weekly (O.R.=1.11, p-value=.050) rather than monthly or yearly. Finally, there appears to be no difference in email/phone contact between married and single offspring. Overall, it appears that phone and email contact with mothers does not differ by offspring's marital status, and some compromise is made in terms of living arrangements and visits. That is, married children do not live very close to mothers, nor do they visit mothers on a daily basis. Yet they are not completely detached from their mothers either.

INSERT TABLE 3-3 HERE

Q2: Does having a partner of a different race/ethnicity negatively affect parent-child relationships compared to those who married within race/ethnic lines?

Table 3-4 presents summary results from multinomial logistic models predicting ties to mothers by whether offspring had entered into exogamous versus endogamous unions. These results include only respondents who are married at Wave 4. Variables included in the model are the same as Model 3 in Table 3-2 with the exception that these analyses also control for marital duration.

INSERT TABLE 3-4 HERE

With respect to emotional closeness to mothers, offspring in exdogamous unions did not report weaker ties to mothers than those in endogamous unions. Yet differences did appear with respect to distance to mothers and contact with mothers. Respondents in exogamous unions were less likely to report living within 50 miles of their mothers compared to those who were married to same-race partners. Figure 3-1 illustrates this point clearly. Holding all other variables at the mean, respondents who are married exogamously are more likely to live 50 miles or further from mothers than those who are married endogamously, whereas the pattern is reversed for closer distances.

INSERT FIGURE 3-1 HERE

In addition, it is clear that individuals who had intermarried are significantly less likely to visit with mothers on a weekly or daily basis compared to those who were married endogamously. Here, Figure 3-2 also illustrates this point. Respondents in exogamous unions are less likely to visit mothers daily and weekly compared to those in endogamous unions.

INSERT FIGURE 3-2 HERE

Finally, those who were married to partners of a different race/ethnicity are less likely to talk to mothers daily compared to those who had married to partners of the same race/ethnic background. Again, Figure 3-3 demonstrates this point. Intermarried individuals are less likely to visit mothers daily, but are more slightly more likely to visit weekly than those who are endogamously married.

INSERT FIGURE 3-3 HERE

Additional tests (not shown here) suggest that differences in visits and phone/email contact are no longer statistically significant after accounting for geographic distance between

mothers and offspring. I do not initially control for geographic proximity in models of contact, however, given that it is likely endogenous with offspring's' desire to maintain contact with her/his mother. That is, contact with mothers may affect where offspring and mothers choose to live.

Q3. Are exogamous unions more detrimental for mother-child relationships among certain groups compared to others?

In addition to the models presented earlier, a series of additional models interacting the respondent's race, immigrant status and gender were estimated to assess whether these characteristics moderated the relationship between union type (endogamous vs. exogamous marriage) and relationship to mothers. Tables 3-5A though 3-5D present results for models that include interaction terms for the respondent's race. Although previous literature suggests that Whites, compared to other groups, stand to lose race/caste privilege when intermarrying and would therefore have weaker ties to mothers, results from the additional tests suggest otherwise. In particular, Asians and Hispanics who intermarry are less likely to live near mothers (Table 3-5B) compared to Whites who intermarry. Wald tests (not shown here) also suggest that these interactions are significant (X^2=14.45, d.f.=6, p-value=.025). Figure 3-4, which illustrates the predicted probability of living within 10 miles from mothers by the respondent's race and union type – demonstrates this point as well. For Whites and Blacks, we see that the gap between those who marry exogamously and those who marry endogamously does not differ greatly. However, the difference is much greater among Asians and Hispanics; those who marry exogamously are less likely to live close to mothers compared to those who marry same-race/ethnic partners.

<div align="center">INSERT TABLES 3-5A THROUGH 3-5D HERE</div>

<div align="center">INSERT FIGURE 3-4 HERE</div>

For the children of immigrants, who face greater pressure from parents to marry within race/ethnic boundaries, intermarriage affects a number of outcomes. Tables 3-6A though 3-6D present results for models that include interactions terms by the respondent's immigrant status. Children of immigrants who intermarry are less likely to live near mothers than children of natives who intermarry (Table 3-6B) (O.R.=.60, p-value=.032). In addition, children of immigrants with different race/ethnic partners are also less likely to visit mothers daily compared to children of natives who intermarry (Table 3-6C) (O.R=.51, p-value=.027). Additional Wald tests (not shown here) also confirm that the interactions are statistically significant.

<center>INSERT TABLES 3-6A THROUGH 3-6D HERE</center>

Finally, there is no evidence to support the idea that offspring's gender moderates the relationship between partner choice and ties to mothers. Despite my hypothesis that intermarriage affects relationships with mothers differently for daughters compared to sons, no statistically significant results were found. These results are presented in Appendix Tables 3-1A through 3-1D.

Q4. Does the effect of intermarriage depend on the specific race/ethnicity of the partner?

Table 3-7 presents summary results from additional models that explore how partner's race in particular affects the respondent's relationship with mothers. Respondents of all race/ethnic groups are included in the analysis, although controls are also included for the respondent's race/ethnicity. The models are similar to those presented in Table 3-2, Model 3 with the exception that an indicator for partner's race was included instead of an indicator for exogamy/endogamy. The first set of columns show results from models where partner's race was coded as non-Hispanic Black or Non-Black (including Hispanics). The second set of columns

presents models where the respondent's race was coded non-Hispanic White or Non-White (including Hispanics).

<center>INSERT TABLE 3-7 HERE</center>

From the first set of columns, it is clear that marrying a Black partner has no significant effect on contact with mothers compared to marrying a non-Black partner. On the other hand, being married to a White partner is associated with weaker ties to mothers across several dimensions. Respondents who married White versus non-White partners are less likely to report being very emotionally close to mothers, compared to those who married non-Whites (O.R.=.74, p-value=.064). Those who are married to Whites are also less likely to live within 10 miles of mothers compared to living more than 50 miles away. Finally, individuals with White partners are less likely to visit mothers daily compared to those who married non-Whites (O.R.=.78, p-value=.080).

Additional analyses (not shown here) however, suggest that the negative consequences of marriage with Whites are unevenly spread across groups. Children of immigrants with White spouses tend to report living further away from mothers and visiting mothers less frequently than children of natives who married Whites. In addition, Asians who married Whites reported weaker ties to mothers than Asians who had married non-Whites on all dimensions: emotional closeness, contact and distance. In sum, the results suggest marriage with Blacks is not associated with weaker mother-child ties, but marriage with Whites negatively affects ties to mothers. In addition, certain groups – including those with immigrant parents – are more likely to suffer the consequences of marriage to Whites compared to their counterparts with native parents.

Discussion

<center>136</center>

Changes in the meaning of marriage have lead recent scholars to declare modern marriage a "greedy institution" (Coser and Coser 1974; Sarkisian and Gerstel 2008). This paper, however, finds that married offspring are not completely detached from parents; rather, they occupy a middle ground. Children who were married lived neither very close to mothers nor very far away from mothers. Married children also tended to visit mothers weekly, but not daily compared to those who were single. In addition, these results confirm findings from earlier cohorts that married children are indeed *more* likely to report close emotional ties to mothers compared to those who are single (Aquilino 1997).

Offspring's union type – whether they are in exogamous versus endogamous unions - also affects relationships with mothers. Children who married across race/ethnic lines are less likely to live near mothers compared to those who married within race/ethnic lines. Because of the geographic distance, these individuals are also less likely to visit or talk to mothers frequently compared to those who married endogamously. These results may on one hand reflect the greater independence of young adults who leave home early, encounter new marriage markets, marry interracially and remain far from their families of origin (Rosenfeld and Kim 2005). On the other hand, these results might also reflect a concerted effort by children who married exogamously (or who wanted to marry exogamously) to live further away from parents. Additional analyses (not shown here) suggest that once accounting for whether children moved before they were married, children in exogamous unions are still less likely to live within 10 miles of mothers, and are also less likely to visit their mothers weekly compared to those who married a same-race/ethnic partner.

Second, race and immigrant status moderate the effect of union type on some indicators of mother-child relationships. Specifically, Whites who intermarried were more likely to live

near mothers than Asians and Hispanics who intermarried, countering expectations of weaker ties among Whites due to loss of race/caste privilege. Although previous findings from interview with whites and blacks parents suggested that white parents were more likely to sever ties to children in interracial unions than Blacks (Lewis and Yancey 1996; Bratter and Eschbach 2006), findings from this study suggest that Asians and Hispanics who intermarried are more likely to live further from mothers compared to Whites who intermarried.

Immigrant background also modified the relationship between partner choice and ties to mothers. As predicted, children of immigrants who intermarried tended to have weaker ties to mothers than children of immigrants who married within the same race/ethnic group. This was found in relation to offspring's geographic proximity to mothers and visits with mothers. The results confirm previous research suggesting that when immigrant parents' preferences for within-group unions are not met, ties between generations are potentially at stake (Foner and Kasinitz 2007; Kalmijn and van Tubergen 2010; Kasinitz et al. 2008; Lee and Bean 2010). However, a separate explanation is that immigrants and ethnic minorities who intermarry are more open to living, and perhaps more importantly, are accepted into neighborhoods where Whites are the majority. Previous research finds that foreign-born Asians and Hispanics with a native-born white spouse are considerably less segregated from native-born white households than from other foreign-born Asian and Hispanic households (Iceland and Nelson 2012). The findings support the idea that exogamous marriages facilitate the residential integration of immigrants and ethnic minorities. At the same time, these unions may pull sons and daughters away from ethnic minority and immigrant parents who remain in less integrated neighborhoods.

Finally, the specific race of the partner mattered more for those who married Whites and not among those who married African-Americans, a finding not predicted by previous research.

Based on prior qualitative research, I had anticipated little effect of marriage to Whites on ties to an individual's parents. However, results from this study suggest that marriage to Whites is associated with weaker ties to mothers compared to non-White partners. This was found in relation to emotional closeness, geographic distance and face-to-face contact with mothers.

Findings from this study thus generally suggest that married individuals have different ties to mothers than those who are single – ties that are neither strong nor weak. However, intermarriage in particular may be associated with weaker intergenerational ties compared to marriage within race/ethnic boundaries. Yet findings from this study should be interpreted with caution. First, Add Health does not ask information about the partner's parents. Geographic distance from one parent may in fact mean being closer to the partner's parents. Second, this project examines first marriages and not other types of unions. Cohabitation may have less impact on parent-child relationships, depending on the social context (Nazio and Saraceno 2010) and cohabitation with a partner of a different race/ethnic origin than one's own may have fewer consequences for parent-child relationships if parents do not view these unions as permanent (Zantvliet et al. 2012). However, future research should examine how partner choice affects ties to parents among cohabiting unions given the large share of interracial unions among these couples (Batson, Qian, and Lichter 2006). Third, these early first marriages examined here may not be representative of intermarriages in general, which previous studies show tend to occur later in life (Lichter 1990). Individuals who marry early on may make concerted efforts to break away from their families of origin and to establish new family identities. Fourth, this paper only examines one aspect of partner's traits ties to parents. It is likely that partner's educational background and socioeconomic status, for example, are equally important dimensions that also influence an individual's ties to parents. Finally, it is likely that the effects

of intermarriage are underestimated in this analysis. Respondents who intermarry may have gauged early on that relationships with parents would not be detrimentally affected, or at the very least, could be mended after marriage.

Nonetheless, this paper sheds light on an important and under-researched topic – the consequences of marriage and in particular, intermarriage for parent-child relationships in later life. As population aging continues, older parents may rely more on adult children to provide assistance with everyday activities, assistance that necessitates geographic proximity. Children who marry "out" may not be able to provide parents with such support if they live far away, as this study clearly illustrates. In addition, the most common form of intermarriage – marriage with Whites – also has negative ramifications for emotional ties to parents. Older ethnic minorities and immigrants whose children intermarry may be especially affected given their precarious social and economic circumstances in later life (Borjas 2009).

This paper calls into question the common acceptance of intermarriage as an indicator and mechanism for racial and ethnic integration in heterogeneous social contexts such as the United States (Gordon 1964). If exogamous unions indeed lead to weaker ties to the family of origin, then marriage does not strengthen ties across race/ethnic group as previously thought (Goldstein 1990). Rather, intermarriage may have much larger negative consequences for the personal lives of those involved, even if intermarriage may be beneficial towards dissipating race/ethnic boundaries at the population level. Future research should explore how parent-child relationships change over time and whether the negative consequences of marriage and intermarriage remain consistent with time.

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TABLES

Table 3-1. Descriptive traits at wave 4*

Respondent's Traits	Percent/ Mean	S.D.	Relationship to mother (w1)	Percent /Mean	S.D.
Union type			Emotional ties to mother scale[1]	0.9	0.1
Unmarried	61.4		Mother encourages independence		
Exogamous marriage	5.4		Strongly disagree	1.0	
Endogamous marriage	33.2		Disagree	4.0	
Marriage duration (among the married only)	4.8	2.9	Neither	11.8	
Race/Ethnicity			Agree	42.4	
white	70.3		Strongly agree	40.8	
black	14.2		Frequency of interaction with mother index[2]		
asian	3.2		0 (no activities)	13.5	
hisp	12.2		1	34.7	
Bio Child of immigrants	15.3		2	32.3	
Female	49.7		3	13.8	
Age	28.8	1.8	4	4.8	
Religious service attendance at W1			5 (all activities)	1.0	
Never/no religion	25.2		R talks to mother about personal problem	37.2	
<1/month	17.4		R talkes to mother about dates/parties	47.0	
>1/month but <1/wk	19.1		R argued with mother	33.7	
>=1/week	38.3		R's mother explains why something is wrong		
Parent	45.8		Strongly agree	35.5	
Education			Agree	46.5	
No HS	8.0		Neither	11.1	
HS	16.7		Disagree	5.7	
Some college	42.4		Strongly disagree	1.3	
BA+	33.0		Family belonging scale[3]	0.7	0.2
Labor Force Status			Relationship to mother (W4)		
Not employed	18.3		Emotional closeness		
Part-time	11.1		Not at all	0.8	
Full-time	70.7		Very little	2.0	
Move			Somewhat	9.0	
Never moved	64.0		Quite a bit	20.9	
Moved after/same year as marriage	8.5		Very much	67.3	
Moved before marriage	27.6		Distance (excludes Rs who live with mothers)		
Mother's and Household's traits			>200miles	23.1	
Mom's age at w4	53.8	5.4	101-200 miles	7.0	
Mother's education at w1			51-100 miles	6.8	
<8grade	5.0		11-50 miles	24.1	
8<grade<12	11.2		1-10 miles	27.9	
HS/GED	36.9		<=1 mile	11.3	
Some college	20.7		Visit (excludes Rs who live with mothers)		
College or more	26.2		Never	0.6	

Cont. from Table 3-1 above

Table 3-1. Descriptive traits at wave 4*

	Percent/ Mean	S.D.		Percent /Mean	S.D.
Mother's and Household's traits			>200miles	23.1	
Mother's partner status at w1			<=1 year	5.2	
No partner	29.6		Few/year	20.4	
Different race/ethnic partner	6.0		1/2 month	23.3	
Same race/ethnic partner	64.4		1/2 Week	31.4	
R living with both bio parents at w1	64.2		Almost daily	19.1	
R's total number of siblings at w1	1.5	1.2	Talk (excludes Rs who live with mothers)		
Controls			Never	1.1	
Region of resident at w1			<=1 year	0.6	
West	16.2		Few/year	1.5	
Midwest	32.0		1/2 month	9.0	
South	38.0		1/2 Week	41.5	
Northeast	13.9		Almost daily	46.4	
Unweighted N			**11,759**		

*Percentages are weighted

[1] Respondents were asked to report on 1) how emotionally close they were to their mother, 2) whether they felt that their mother cared about them, and 3) whether their mother was warm and loving toward them. These items were grouped together and re-scaled to range from 0 to 1, where 0 indicates a weak relationship and 1 indicates a strong relationship. [2] Respondents reported on whether they did the following with mothers in past week: shopping, playing a sport, going to church, going to a movie/museum/other cultural event, worked on a school project. These items were added together (0=no activities, 5=all activities). [3]The respondent was asked to rate the degree to which they believed their family understood them, whether they had fun with their family, and whether their family paid attention to them.These items were combined into a factor-based scale and re-scaled to range from 0 to 1.

Table 3-2. Parameters from multinomial logistic regression model predicting emotional closeness to mothers by marital status (base: less than somewhat) (N=11,759)

| | Model 1 | | | | | |
| | Quite a bit | | | Very much | | |
	O.R.	Z-score	P>t	O.R.	Z-score	P>t
Marital Status						
Married (base: unmarried)	1.08	1.02	0.310	1.29	3.86	0.000
Respondent's traits						
Race/ethnic group (base: white)						
Black	0.88	-1.28	0.200	1.54	5.08	0.000
Asian	0.70	-2.17	0.030	0.56	-4.03	0.000
Hispanic	0.99	-0.04	0.966	1.36	2.81	0.005
Child of immigrants	1.09	0.71	0.477	0.94	-0.59	0.557
Female	0.61	-6.88	0.000	0.90	-1.68	0.093
Age	0.98	-1.18	0.236	0.98	-1.22	0.221
Religious attendance at w1 (base: never)						
<1/month	0.99	-0.14	0.885	1.04	0.50	0.620
>1/month but <1/wk |	1.01	0.05	0.959	1.09	0.99	0.321
>=1/week	1.15	1.57	0.117	1.24	2.80	0.005
Parent	0.78	-3.23	0.001	0.78	-3.66	0.000
Education (base: no HS)						
HS	1.29	1.66	0.096	1.35	2.41	0.016
Some college	1.50	3.00	0.003	1.25	2.05	0.041
BA+	1.91	4.47	0.000	1.54	3.58	0.000
Labor force status (base: not employed)						
1-34 hrs/wk	1.25	1.79	0.073	1.10	0.88	0.377
35+ hrs/wk	1.16	1.61	0.107	1.21	2.46	0.014
Mother's traits						
Age difference >25 years						
Mother's education at t1 (base: <8 grade)						
Less than HS						
HS/GED						
Some College						
College or more						
Mother's union type at t1 (no union)						
Exogamous union						
Endogamous union						
Household and neighborhood traits at t1						
Living with both bioparents						
Number of siblings						
Relationship to mother at t1						
Affective ties to mother						
Mother encourages independence						
Frequency of interaction with mother						
Talks to mother about personal problem						
Talks to mother about dates/parties						
Family Belonging						
Argue with mom						
Mom explained why something was wrong						
Log liklihood			-9659.8			

Notes: Models control for region of residence at w1

Table 3-2. Parameters from multinomial logistic regression model predicting emotional closeness to mothers by marital status (base: less than somewhat) (N=11,759)

| | Model 2 | | | | | |
| | Quite a bit | | | Very much | | |
	O.R.	Z-score	P>t	O.R.	Z-score	P>t
Marital Status						
Married (base: unmarried)	1.06	0.80	0.427	1.26	3.52	0.000
Respondent's traits						
Race/ethnic group (base: white)						
Black	0.97	-0.33	0.741	1.77	6.49	0.000
Asian	0.70	-2.16	0.031	0.57	-3.90	0.000
Hispanic	1.08	0.59	0.556	1.44	3.23	0.001
Child of immigrants	1.06	0.48	0.634	0.90	-1.07	0.287
Female	0.62	-6.65	0.000	0.90	-1.61	0.108
Age	0.97	-1.30	0.194	0.97	-1.51	0.131
Religious attendance at w1 (base: never)						
<1/month	0.97	-0.27	0.786	1.04	0.40	0.689
>1/month but <1/wk |	0.99	-0.14	0.892	1.08	0.87	0.386
>=1/week	1.11	1.13	0.259	1.21	2.39	0.017
Parent	0.79	-2.93	0.003	0.79	-3.41	0.001
Education (base: no HS)						
HS	1.24	1.41	0.158	1.31	2.17	0.030
Some college	1.41	2.50	0.012	1.22	1.78	0.075
BA+	1.71	3.51	0.000	1.47	3.05	0.002
Labor force status (base: not employed)						
1-34 hrs/wk	1.24	1.71	0.087	1.09	0.79	0.430
35+ hrs/wk	1.14	1.43	0.154	1.17	2.08	0.037
Mother's traits						
Age difference >25 years	1.00	-0.06	0.953	1.01	0.21	0.832
Mother's education at t1 (base: <8 grade)						
Less than HS	0.86	-0.80	0.424	0.85	-1.03	0.305
HS/GED	0.97	-0.16	0.876	0.90	-0.69	0.489
Some College	0.90	-0.56	0.573	0.77	-1.65	0.099
College or more	1.00	-0.01	0.994	0.75	-1.85	0.065
Mother's union type at t1 (no union)						
Exogamous union	0.76	-1.93	0.054	0.71	-2.83	0.005
Endogamous union	0.99	-0.14	0.888	0.97	-0.41	0.680
Household and neighborhood traits at t1						
Living with both bioparents	1.37	3.89	0.000	1.53	6.06	0.000
Number of siblings	0.96	-1.37	0.169	0.94	-2.54	0.011
Relationship to mother at t1						
Affective ties to mother						
Mother encourages independence						
Frequency of interaction with mother						
Talks to mother about personal problem						
Talks to mother about dates/parties						
Family Belonging						
Argue with mom						
Mom explained why something was wrong						
Log liklihood			-9622.0			

Notes: Models control for region of residence at w1

Table 3-2. Parameters from multinomial logistic regression model predicting emotional closeness to mothers by marital status (base: less than somewhat) (N=11,759)

| | Model 3 | | | | | |
| | Quite a bit | | | Very much | | |
	O.R.	Z-score	P>t	O.R.	Z-score	P>t
Marital Status						
Married (base: unmarried)	1.05	0.65	0.513	1.20	2.66	0.008
Respondent's traits						
Race/ethnic group (base: white)						
Black	0.99	-0.12	0.905	1.80	6.38	0.000
Asian	0.73	-1.89	0.059	0.64	-2.97	0.003
Hispanic	1.13	0.89	0.374	1.50	3.47	0.001
Child of immigrants	1.03	0.29	0.775	0.87	-1.26	0.207
Female	0.67	-5.45	0.000	1.00	0.00	0.998
Age	0.99	-0.44	0.656	1.02	0.78	0.435
Religious attendance at w1 (base: never)						
<1/month	0.95	-0.52	0.602	0.96	-0.46	0.643
>1/month but <1/wk		0.92	-0.82	0.414	0.91	-1.03	0.303
>=1/week	1.01	0.14	0.887	0.97	-0.40	0.687
Parent	0.80	-2.84	0.004	0.80	-3.16	0.002
Education (base: no HS)						
HS	1.18	1.10	0.273	1.20	1.37	0.171
Some college	1.36	2.17	0.030	1.12	0.97	0.330
BA+	1.56	2.89	0.004	1.20	1.38	0.167
Labor force status (base: not employed)						
1-34 hrs/wk	1.22	1.56	0.120	1.05	0.46	0.648
35+ hrs/wk	1.11	1.12	0.264	1.11	1.32	0.188
Mother's traits						
Age difference >25 years	1.01	0.15	0.878	1.07	1.01	0.313
Mother's education at t1 (base: <8 grade)						
Less than HS	0.83	-0.99	0.321	0.75	-1.71	0.088
HS/GED	0.93	-0.42	0.673	0.79	-1.55	0.121
Some College	0.86	-0.80	0.425	0.68	-2.38	0.017
College or more	0.95	-0.28	0.779	0.65	-2.67	0.008
Mother's union type at t1 (no union)						
Exogamous union	0.73	-2.10	0.035	0.68	-2.98	0.003
Endogamous union	0.98	-0.29	0.772	0.95	-0.74	0.462
Household and neightborhood traits at t1						
Living with both bioparents	1.34	3.56	0.000	1.47	5.40	0.000
Number of siblings	0.97	-1.02	0.306	0.96	-1.41	0.159
Relationship to mother at t1						
Affective ties to mother	3.80	4.61	0.000	20.29	11.22	0.000
Mother encourages independence	0.95	-1.35	0.178	0.97	-0.84	0.402
Frequency of interaction with mother	1.05	1.20	0.232	1.09	2.53	0.011
Talks to mother about personal problem	0.98	-0.31	0.759	1.12	1.60	0.109
Talks to mother about dates/parties	1.06	0.71	0.475	1.22	2.91	0.004
Family Belonging	1.79	2.69	0.007	5.63	9.04	0.000
Argue with mom	1.00	0.02	0.980	0.93	-1.11	0.266
Mom explained why something was wrong	1.03	0.67	0.504	0.95	-1.21	0.227
Log liklihood			-9244.0			

Notes: Models control for region of residence at W1

Table 3-3. Parameters from multinomial logistic regression model predicting mother-child relationships at wave 4 by respondent's marital status*

	Married vs. Never married		
	O.R.	Z-score	p-value
Mother-Child Relationship Measure			
Emotional closeness to mothers (base: less than somewhat) (N=11,759)			
Quite a bit	1.05	0.65	0.513
Very much	1.20	2.66	0.008
Distance to mothers (base: more than 50 miles from mother) (N=9,560)[1]			
11-50 miles	1.15	2.39	0.017
<=10 miles	1.02	0.33	0.739
Visits with mothers (base: less than weekly) (N=9,560)[1]			
Weekly	1.11	1.96	0.050
Daily	0.84	-2.70	0.007
Talk with mothers (base: less than weekly) (N=9,560)[1]			
Weekly	0.98	-0.24	0.810
Daily	0.89	-1.54	0.123

*Model 3 from Table 2: All models control for: respondent's race/ethnicity, immigrant status, gender, age, religious attendance at W1, parental status, education, labor force status and whether the respondent moved across state borders before marriage. In addition, all models also control for mothers' traits, including mother's age (if alive), education, and whether she was in an endogamous/exogamous union at w1 (if partnered at all). Household traits include whether the respondent lived with both biological parents at W1, number of coresident siblings at W1 and the percent same-ethnicity in the respondent's home tract at W1. Region of residence at W1 (West, East, MidWest
[1]Excludes respondents who coreside with mothers at W4

Table 3-4. Parameters from multinomial logistic regression model predicting mother-child relationships at wave 4 by respondent's partner type (married respondents only)

	Exogamous vs. Endogamous*		
	O.R.	Z-score	p-value
Outcome			
Emotional closeness to mothers (base: less than somewhat) (N=4,604)			
Quite a bit	1.09	0.53	0.596
Very much	0.97	-0.24	0.810
Distance to mothers (base: more than 50 miles from mother) (N=4,328)[1]			
11-50 miles	0.72	-2.68	0.007
<=10 miles	0.73	-2.89	0.004
Visits with mothers (base: less than weekly) (N=4,328)[1]			
Weekly	0.77	-2.44	0.015
Daily	0.76	-2.04	0.041
Talk with mothers (base: less than weekly) (N=4,328)[1]			
Weekly	0.81	-1.46	0.144
Daily	0.68	-2.54	0.011

*All models control for marital duration, respondent's race/ethnicity, immigrant status, gender, age, religious attendance at W1, parental status, education, labor force status and whether the respondent moved across state borders before marriage. In addition, all models also control for mothers' traits, including mother's age (if alive), education, and whether she was in an endogamous/exogamous union at w1 (if partnered at all). Household traits include whether the respondent lived with both biological parents at W1, number of coresident siblings at W1 and the percent same-ethnicity in the respondent's home tract at W1. Region of residence (West, East, MidWest and
[1]Excludes respondents who coreside with mothers at W4

Table 3-5A. Parameters from multinomial logistic regression model predicting emotional closeness to mother at wave 4, Interactions by race (base: less than somewhat)* (N=4,604)

	Quite a bit			Very much		
	O.R.	Z-score	p-value	O.R.	Z-score	p-value
Relationship type (base: Endogamous union)						
Exogamous union	1.32	1.21	0.225	1.16	0.70	0.484
Exogamous unionXBlack	0.83	-0.35	0.723	0.64	-1.02	0.308
Exogamous unionXAsian	0.52	-1.28	0.199	0.47	-1.67	0.095
Exogamous unionXHispanic	0.71	-0.82	0.412	0.88	-0.35	0.725
Duration of relationship (years)	1.01	0.42	0.671	0.97	-1.32	0.188
Respondent's traits						
Race/ethnic group (base: white)						
Black	0.86	-0.59	0.556	2.13	3.72	0.000
Asian	0.94	-0.18	0.855	1.33	0.90	0.370
Hispanic	1.43	1.29	0.199	2.15	3.09	0.002
Child of immigrants	0.97	-0.14	0.887	0.71	-1.85	0.065
Female	0.91	-0.77	0.442	1.67	4.47	0.000
Log liklihood			**-3474.6**			

*Model controls for respondent's age, religious attendance at W1, parental status, education, labor force status and whether the respondent moved across state borders before marriage. In addition, all models also control for mothers' traits, including mother's age (if alive), education, and whether she was in an endogamous/exogamous union at w1 (if partnered at all). Household traits include whether the respondent lived with both biological parents at W1, number of coresident siblings at W1 and region of residence at W1.

Table 3-5B. Parameters from multinomial logistic regression model predicting distance to mother at wave 4, Interactions by race (base: 50 miles or more)* (N=4,328)

	11-50 miles			<=10 miles		
	O.R.	Z-score	p-value	O.R.	Z-score	p-value
Relationship type (base: Endogamous union)						
Exogamous union	0.87	-0.82	0.412	1.03	0.20	0.843
Exogamous unionXBlack	0.79	-0.64	0.521	0.76	-0.89	0.372
Exogamous unionXAsian	0.58	-1.34	0.180	0.31	-2.92	0.004
Exogamous unionXHispanic	0.63	-1.53	0.125	0.45	-3.01	0.003
Duration of relationship (years)	0.97	-1.63	0.102	0.98	-1.04	0.299
Respondent's traits						
Race/ethnic group (base: white)						
Black	0.75	-1.91	0.056	0.92	-0.66	0.511
Asian	3.83	4.56	0.000	3.17	4.21	0.000
Hispanic	1.96	3.23	0.001	2.47	4.83	0.000
Child of immigrants	0.70	-2.16	0.031	0.77	-1.81	0.070
Female	1.20	2.00	0.046	1.30	3.11	0.002
Log liklihood			**-4426.5**			

Table 3-5C. Parameters from multinomial logistic regression model predicting visits with mother at wave 4, Interactions by race (base: less than weekly)* (N=4,328)

	weekly			daily		
	O.R.	Z-score	p-value	O.R.	Z-score	p-value
Relationship type (base: Endogamous union)						
Exogamous union	0.89	-0.81	0.416	0.98	-0.13	0.898
Exogamous unionXBlack	0.93	-0.24	0.807	0.71	-0.94	0.347
Exogamous unionXAsian	0.44	-2.24	0.025	0.61	-0.98	0.325
Exogamous unionXHispanic	0.83	-0.72	0.470	0.60	-1.58	0.114
Duration of relationship (years)	0.98	-1.65	0.100	1.00	-0.23	0.816
Respondent's traits						
Race/ethnic group (base: white)						
Black	0.85	-1.20	0.231	1.78	3.79	0.000
Asian	1.81	2.48	0.013	2.44	2.71	0.007
Hispanic	1.68	3.00	0.003	2.49	4.45	0.000
Child of immigrants	1.04	0.26	0.795	0.68	-2.18	0.029
Female	1.45	4.58	0.000	2.62	9.15	0.000
Log liklihood			**-4154.5**			

Table 3-5D. Parameters from multinomial logistic regression model predicting contact with mother at wave 4, Interactions by race (base: less than weekly)* (N=4,328)

	weekly			daily		
	O.R.	Z-score	p-value	O.R.	Z-score	p-value
Relationship type (base: Endogamous union)						
Exogamous union	0.93	-0.38	0.705	0.74	-1.45	0.148
Exogamous unionXBlack	0.88	-0.31	0.755	0.95	-0.12	0.907
Exogamous unionXAsian	0.66	-0.91	0.362	0.53	-1.22	0.222
Exogamous unionXHispanic	0.72	-0.87	0.384	0.92	-0.23	0.821
Duration of relationship (years)	0.96	-2.16	0.031	0.95	-2.46	0.014
Respondent's traits						
Race/ethnic group (base: white)						
Black	1.01	0.04	0.965	1.99	3.27	0.001
Asian	1.58	1.40	0.162	1.75	1.57	0.117
Hispanic	2.16	2.91	0.004	3.02	4.12	0.000
Child of immigrants	0.78	-1.34	0.181	0.64	-2.29	0.022
Female	1.89	5.09	0.000	8.17	16.36	0.000
Log liklihood			**-3695.1**			

Table 3-6A. Parameters from multinomial logistic regression model predicting emotional closeness to mother at wave 4, Interactions by immigrant status (base: less than somewhat)* (N=4,604)

	Quite a bit			Very much		
	O.R.	Z-score	p-value	O.R.	Z-score	p-value
Relationship type (base: Endogamous)						
Exogamous union	1.27	1.21	0.227	1.04	0.23	0.817
Exogamous x child of immigrants	0.61	-1.43	0.152	0.78	-0.82	0.411
Duration of relationship (years)	1.01	0.42	0.678	0.97	-1.34	0.182
Respondent's traits						
Race/ethnic group (base: white)						
Black	0.84	-0.79	0.427	1.97	3.71	0.000
Asian	0.76	-0.87	0.387	1.07	0.25	0.806
Hispanic	1.26	0.97	0.332	2.09	3.55	0.000
Child of immigrants	1.13	0.52	0.602	0.75	-1.41	0.159
Female	0.90	-0.77	0.439	1.67	4.49	0.000
Log liklihood				**-3475.9**		

*Model controls for respondent's age, religious attendance at W1, parental status, education, labor force status and w hether the respondent moved across state borders before marriage. In addition, all models also control for mothers' traits, including mother's age (if alive), education, and w hether she w as in an endogamous/exogamous union at w 1 (if partnered at all). Household traits include w hether the respondent lived w ith both biological parents at W1, number of coresident siblings at W1 and region of residence at W1.

Table 3-6B. Parameters from multinomial logistic regression model predicting distance to mother at wave 4, Interactions by immigrant status (base: 50 miles or more)* (N=4,328)

	11-50 miles			<=10 miles		
	O.R.	Z-score	p-value	O.R.	Z-score	p-value
Relationship type (base: Endogamous)						
Exogamous union	0.67	-2.69	0.007	0.84	-1.38	0.168
Exogamous x child of immigrants	1.21	0.74	0.458	0.60	-2.14	0.032
Duration of relationship (years)	0.97	-1.60	0.110	0.98	-1.07	0.287
Respondent's traits						
Race/ethnic group (base: white)						
Black	0.73	-2.25	0.025	0.88	-1.01	0.313
Asian	3.02	4.45	0.000	2.11	3.22	0.001
Hispanic	1.68	2.97	0.003	1.81	3.86	0.000
Child of immigrants	0.70	-2.05	0.041	0.93	-0.47	0.640
Female	1.21	2.01	0.044	1.30	3.13	0.002
Log liklihood				**-4429.5**		

Table 3-6C. Parameters from multinomial logistic regression model predicting visits with mother at wave 4, Interactions by immigrant status (base: less than weekly)* (N=4,328)

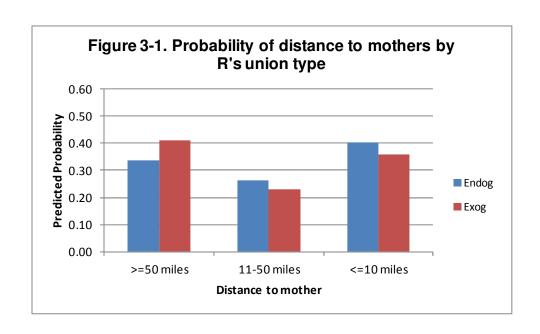|	weekly			daily		
	O.R.	Z-score	p-value	O.R.	Z-score	p-value
Relationship type (base: Endogamous)						
Exogamous union	0.81	-1.64	0.101	0.90	-0.66	0.510
Exogamous x child of immigrants	0.83	-0.86	0.387	0.51	-2.21	0.027
Duration of relationship (years)	0.98	-1.64	0.101	0.99	-0.33	0.742
Respondent's traits						
Race/ethnic group (base: white)						
Black	0.84	-1.36	0.174	1.69	3.71	0.000
Asian	1.41	1.63	0.103	2.04	2.49	0.013
Hispanic	1.59	3.16	0.002	2.05	4.05	0.000
Child of immigrants	1.10	0.66	0.510	0.83	-0.97	0.331
Female	1.44	4.55	0.000	2.63	9.21	0.000
Log liklihood			**-4155.7**			

Table 3-6D. Parameters from multinomial logistic regression model predicting contact with mother at wave 4, Interactions by immigrant status (base: less than weekly)* (N=4,328)
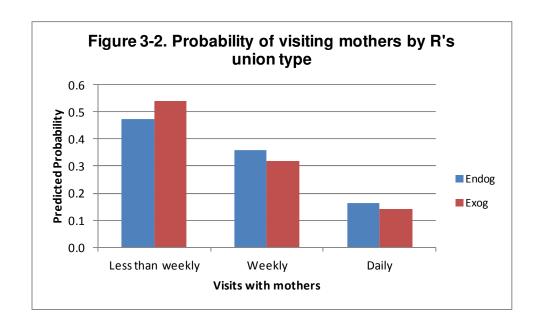
	weekly			daily		
	O.R.	Z-score	p-value	O.R.	Z-score	p-value
Relationship type (base: Endogamous)						
Exogamous union	0.87	-0.78	0.433	0.75	-1.66	0.098
Exogamous x child of immigrants	0.77	-0.86	0.392	0.74	-0.94	0.346
Duration of relationship (years)	0.96	-2.18	0.030	0.95	-2.48	0.013
Respondent's traits						
Race/ethnic group (base: white)						
Black	0.99	-0.07	0.943	1.97	3.64	0.000
Asian	1.37	1.11	0.267	1.42	1.15	0.248
Hispanic	1.90	2.98	0.003	2.90	4.80	0.000
Child of immigrants	0.85	-0.77	0.441	0.69	-1.73	0.084
Female	1.89	5.11	0.000	8.14	16.39	0.000
Log liklihood			**-3696.1**			
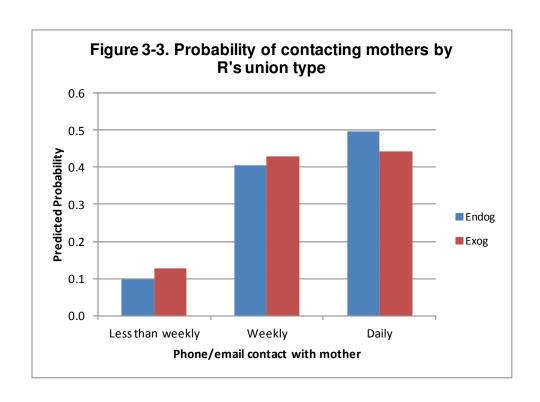
Table 3-7. Parameters from multinomial logistic regression model predicting mother-child relationships at wave 4 by partner's specific race (married respondents only)
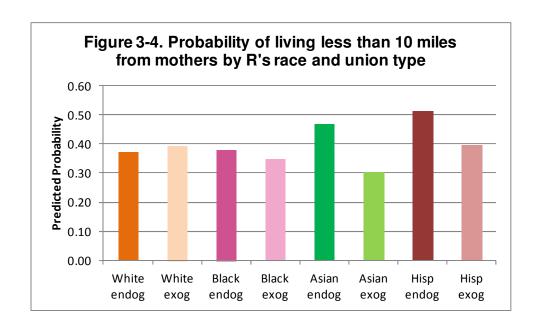
	Black vs. Non-Black/Hispanic Partner*			White vs. Non-White/Hispanic Partner*		
	O.R.	Z-score	p-value	O.R.	Z-score	p-value
Outcome						
Emotional closeness to mothers (base: less than somewhat) (N=4,604)						
Quite a bit	1.00	-0.01	0.989	0.84	-0.97	0.332
Very much	1.11	0.36	0.717	0.74	-1.86	0.064
Distance to mothers (base: more than 50 miles from mother) (N=4,328)[1]						
11-50 miles	1.10	0.38	0.703	0.84	-1.36	0.175
<=10 miles	0.88	-0.59	0.557	0.77	-2.25	0.024
Visits with mothers (base: less than weekly) (N=4,328)[1]						
Weekly	0.99	-0.05	0.960	0.89	-1.07	0.285
Daily	1.08	0.32	0.751	0.78	-1.75	0.080
Talk with mothers (base: less than weekly) (N=4,328)[1]						
Weekly	0.78	-0.81	0.416	0.99	-0.05	0.958
Daily	0.99	-0.05	0.958	1.00	-0.03	0.978

*All models control for marital duration, respondent's race/ethnicity, immigration status, gender, age, religious attendance at W1, parental status, education, labor force status and whether the respondent moved across state borders before marriage. In addition, all models also control for mothers' traits, including mother's age (if alive), education, and whether she was in an endogamous/exogamous union at w1 (if partnered at all). Household traits include whether the respondent lived with both biological parents at W1, number of coresident siblings at

[1]Excludes respondents who coreside with mothers at W4

Figure 3-1. Probability of distance to mothers by R's union type

Figure 3-2. Probability of visiting mothers by R's union type

Figure 3-3. Probability of contacting mothers by R's union type

Figure 3-4. Probability of living less than 10 miles from mothers by R's race and union type

APPENDIX TABLES

Appendix Table 3-1A. Parameters from multinomial logistic regression model predicting emotional closeness to mother at wave 4, Interactions by gender (base: less than somewhat)* (N=4,604)

	Quite a bit			Very much		
	O.R.	Z-score	p-value	O.R.	Z-score	p-value
Relationship type (base: Endogamous)						
Exogamous union	1.32	1.22	0.223	1.20	0.88	0.378
Exogamous x female	0.69	-1.19	0.234	0.66	-1.52	0.129
Duration of relationship (years)	1.01	0.39	0.698	0.97	-1.38	0.167
Respondent's traits						
Race/ethnic group (base: white)						
Black	0.84	-0.81	0.420	1.95	3.66	0.000
Asian	0.76	-0.87	0.382	1.08	0.26	0.793
Hispanic	1.28	1.07	0.285	2.11	3.62	0.000
Child of immigrants	1.00	-0.02	0.983	0.70	-1.88	0.059
Female	0.96	-0.30	0.765	1.79	4.72	0.000
Log liklihood			**-3475.8**			

*Model controls for respondent's age, religious attendance at W1, parental status, education, labor force status and whether the respondent moved across state borders before marriage. In addition, all models also control for mothers' traits, including mother's age (if alive), education, and whether she was in an endogamous/exogamous union at w1 (if partnered at all). Household traits include whether the respondent lived with both biological parents at W1, number of coresident siblings at W1 and region of residence at W1.

Appendix Table 3-1B. Parameters from multinomial logistic regression model predicting distance to mother at wave 4, Interactions by gender (base: 50 miles or more)* (N=4,328)

	11-50 miles			<=10 miles		
	O.R.	Z-score	p-value	O.R.	Z-score	p-value
Relationship type (base: Endogamous)						
Exogamous union	0.72	-1.90	0.058	0.76	-1.81	0.070
Exogamous x female	1.00	-0.02	0.986	0.93	-0.36	0.718
Duration of relationship (years)	0.97	-1.62	0.104	0.98	-1.02	0.308
Respondent's traits						
Race/ethnic group (base: white)						
Black	0.73	-2.28	0.023	0.89	-0.95	0.340
Asian	3.02	4.47	0.000	2.08	3.17	0.002
Hispanic	1.64	2.88	0.004	1.87	4.08	0.000
Child of immigrants	0.73	-1.96	0.051	0.82	-1.37	0.172
Female	1.21	1.89	0.059	1.32	3.03	0.002
Log liklihood			**-4433.7**			

Appendix Table 3-1C. Parameters from multinomial logistic regression model predicting visits with mother at wave 4, Interactions by gender (base: less than weekly)* (N=4,328)

	weekly			daily		
	O.R.	Z-score	p-value	O.R.	Z-score	p-value
Relationship type (base: Endogamous)						
Exogamous union	0.81	-1.41	0.159	0.69	-1.75	0.080
Exogamous x female	0.90	-0.53	0.599	1.15	0.54	0.591
Duration of relationship (years)	0.98	-1.64	0.101	1.00	-0.23	0.817
Respondent's traits						
Race/ethnic group (base: white)						
Black	0.84	-1.36	0.175	1.71	3.80	0.000
Asian	1.40	1.59	0.112	2.01	2.43	0.015
Hispanic	1.60	3.24	0.001	2.16	4.38	0.000
Child of immigrants	1.04	0.33	0.743	0.71	-1.96	0.050
Female	1.46	4.40	0.000	2.57	8.45	0.000
Log liklihood			**-4157.8**			

Appendix Table 3-1D. Parameters from multinomial logistic regression model predicting contact with mother at wave 4, Interactions by gender (base: less than weekly)* (N=4,328)

	weekly			daily		
	O.R.	Z-score	p-value	O.R.	Z-score	p-value
Relationship type (base: Endogamous)						
Exogamous union	0.92	-0.49	0.627	0.84	-0.91	0.365
Exogamous x female	0.68	-1.36	0.172	0.61	-1.72	0.085
Duration of relationship (years)	0.96	-2.20	0.028	0.95	-2.51	0.012
Respondent's traits						
Race/ethnic group (base: white)						
Black	0.98	-0.11	0.909	1.95	3.58	0.000
Asian	1.37	1.13	0.257	1.43	1.18	0.240
Hispanic	1.91	3.01	0.003	2.90	4.87	0.000
Child of immigrants	0.80	-1.22	0.224	0.64	-2.31	0.021
Female	2.03	5.20	0.000	8.89	15.69	0.000
Log liklihood			**-3695.1**			