# INTERGENERATIONAL SOCIALIZATION OF GENDER FROM 

 GRANDPARENTS TO GRANDCHILDREN: EXAMINING MECHANISMS OF EXPOSUREA THESIS<br>SUBMITTED TO THE GRADUATE FACULTY<br>in partial fulfillment of the requirements for the<br>Degree of<br>MASTER OF ARTS

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INTERGENERATIONAL SOCIALIZATION OF GENDER FROM GRANDPARENTS TO GRANDCHILDREN: EXAMINING MECHANISMS OF EXPOSURE

## A THESIS APPROVED FOR THE

 DEPARTMENT OF SOCIOLOGYBY

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I would like to dedicate my thesis to the memory of my grandmother, Dorothy Nilsson, who moved to the big city from rural Kentucky so that her future family could have a better life, who always valued education, and who defied any gender norm the world tried to place on her.

## Acknowledgements

I could not have survived this process without the endless support, guidance, and assistance in developing this project by my chair, Dr. Stephanie Burge. Many thanks as well to my committee members Dr. Ann Beutel and Dr. Amy Kroska for their insight and expertise in helping me refine my thesis. I would also like to thank the Department of Sociology and the Graduate College for their generous support. Research for this thesis was made possible through a Robberson Research \& Creative Endeavors Grant.

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#### Abstract

Though grandparents are known to be influential in the lives of their grandchildren, little quantitative research exists to assess the intergenerational socialization of gender ideology within the grandparent-grandchild relationship. Using the Longitudinal Study of Generations (LSOG), this study will examine grandparent-parent-grandchild triads to better understand how grandparents' gender ideology shape those of their grandchildren, controlling for the influence of parents. This study will investigate the mechanisms of socialization including grandparental closeness, contact, proximity and co-residence as moderators of the relationship between grandparent and grandchild gender ideology similarity. Thus, I investigate two primary research questions. First, to what extent are grandparent and grandchild gender ideologies associated, controlling for the indirect influence of parents' gender ideology? Second, do mechanisms of exposure moderate this relationship? Ultimately, these findings will further illuminate the relationship between family and gender ideology socialization outside of the immediate family and will add to existing research on intergenerational socialization.


## Introduction

Since the 1970s, Americans' attitudes towards gender have shifted considerably, moving from more gender differentiated ideas about women's and men's roles within the public and private spheres of life to more gender egalitarian beliefs concerning women's educational attainment, work force participation, and the appropriate division of household labor (Brewster \& Padavic 2000; Davis \& Greenstein 2009; Wilkie 1993). The changing landscape of American beliefs about gender (or gender ideology) has sparked a large body of sociological and psychological research on factors associated with the formation of gender ideology (Kane 2000; Davis and Greenstein 2009). Much of this scholarship focuses on the influential role of family relationships and in particular the way that parents shape adolescents' and young adults' gender ideologies (Bolzendahl \& Myers, 2004; Carlson \& Knoester, 2011; Cunningham, 2001a, 2001b; Davis \& Greenstein, 2009; Davis \& Wills, 2010; Filler \& Jennings, 2015; Gupta, 2006; Kane, 2006; Marks et al., 2009; Moen et al., 2007). Yet, we know comparatively little about the ways that extended family ties may influence the formation of gender ideology. As one step in building our knowledge regarding the process of intergenerational transmission of gender ideology, I focus on how the grandparentgrandchild relationship may offer additional avenues for understanding the process by which young people develop beliefs about gender.

A longer life span has led to more shared time between grandparents and grandchildren, and technology has connected individuals in new and meaningful ways (Bengtson, 2001). Furthermore, grandparents are increasingly taking on a pseudoparental role either as co-residents in multi-generational households or as custodial
grandparents. Instances of these relationships have been increasing since 2000, thereby positioning the study of grandparents as integral to understanding the processes and impacts of changing family forms on the individuals who experience them (U.S. Census Bureau, 2012; 2001). As such, multigenerational studies are becoming increasingly important to the study of family processes, as researchers look beyond the nuclear family to further unpack the complexities of previously studied significant social processes, such as the formation of gender ideology. Increased attention to multigenerational studies, along with changes in the grandparental relationship in recent history merit focus on the processes by which grandparent-grandchild relationship is uniquely influential-beyond the sway of parents-for informing young adults' gender beliefs.

While grandparents have been proven to be influential in many dimensions of their grandchildren's lives (Bengtson et al., 2009; Copen \& Silverstein, 2007; DrywaterWhitekiller, 2006; McAdoo \& McWright, 1995; McWright, 2002; Mulder, 2012), little research examines whether grandparents are influential in the process of gender ideology socialization of their grandchildren. Drawing on the theoretical perspectives of exposure and intergenerational solidarity, this study uses uniquely suited data from the Longitudinal Study of Generations (LSOG) to investigate processes of intergenerational gender ideology socialization from grandparents to grandchildren. I examine two primary research questions. First, to what extent are grandparent and grandchild gender ideologies associated, controlling for the indirect influence of parents' gender ideology? Second, do mechanisms of exposure (e.g., closeness, contact, and proximity) moderate this relationship? This line of inquiry will engage with existing literature on
intergenerational socialization, while adding to our understanding of contemporary family forms that may include grandparental co-residence. Ultimately, the goal of this research is to contribute to a greater line of knowledge concerning grandparental relationships and the transmission of ideologies within this context.

## Literature Review

## Intergenerational Ties

Scholars in the sociological study of the family, particularly Vern Bengtson (2001), have established multigenerational research as essential, and increasingly relevant, to the study of family structure. Traditionally, family research has centered on the nuclear family as a phenomenon emergent in tandem with the industrial revolution (Burgess, 1926; Davis, 1941; Ogburn, 1932; Parsons, 1944; Sussman, 1959). However, more and more researchers are recognizing the necessity of expanding analysis to extended family members. Focusing research on grandparenthood is particularly of interest due to increasing life expectancy resulting in more years of shared lives between generations, increasing divorce and diversity in family structures, and the rising prevalence of grandparents taking on a parenting role (Bengtson, 2011Thus, intergenerational processes merit study.

Intergenerational solidarity is a multidimensional concept in which six dimensions of solidarity operate to connect family members to one another as a cohesive unit (Bengtson, 2001; Lee, Dik \& Barbara, 2015). Intergenerational solidarity as a concept has long been crucial to the analysis of family relationships, with classical sociologists such as Emile Durkheim emphasizing the role of intergenerational linkages in the family for socialization of values and beliefs (Hammarstrom, 2005). Furthermore,
more scholars have been urged to engage with family socialization as a "dynamic, interactive process between parents and children across generations" rather than as a static event by direct actors only in one's childhood (Putney \& Bengtson, 2002: 166).

This method of analysis is congruent with the life course perspective which approaches sociological phenomena as lifelong processes rather than as fixed events at a single point in time. The life course perspective is pertinent to the study of families particularly through the concept of linked lives. This concept emphasizes the interdependence of individuals with the understanding that individuals impact and are impacted by others (Settersten, 2015; Elder, 1994). In researching the processes of socialization, the concept of linked lives is integral to understanding how grandparents influence their grandchildren, and underscores the importance of studying extended family relationships.

## Grandparenthood

Grandparents have been portrayed as "rescuers" in times of family crisis since the 1940s, and grandparents often step in to assist in times of need, though the nature of these situations have changed. While grandparents often stepped in after wartime marriages dissolved or during economic crises, now grandparents may be called to help in times of divorce, drug abuse, incarceration, and teen pregnancy (Casper \& Bianchi, 2002; Sharp \& Marcus-Mendoza, 2001). However, due to increased longevity and preferences for non-institutional living, grandparents may also need to reside with their children due to their own health limitations (Bianchi et al, 2008; Casper \& Bianchi, 2002; Choi et al., 2015). These changes have the potential to lead to an increased role for grandparents in grandchildren's lives.

A common finding in the literature is that parents play a key role as mediators in the grandparent-grandchild relationship, acting as gatekeepers of access to grandparents, especially when divorce or separation occurs (Attar-Schwarz et al, 2009; Doyle et al., 2010; Kemp, 2007; Kennedy, 1990; Matthews \& Sprey, 1985). However, these findings may be racially specific. Expectations of parents as mediators are more likely to be held by white adult grandchildren than black adult grandchildren, who expect grandparents to be more involved with assisting parents in parenting activities, providing discipline, guidance, and support (Kennedy, 1990).

One way that grandparents may influence grandchildren's lives is through intergenerational co-residence, a manifestation of structural solidarity. Consequently, racial-ethnic variation in the experiences of grandparent-grandchild relationships is likely connected to racial-ethnic variation in patterns of grandparental co-residence. Minorities are more likely than whites to experience multigenerational co-residence as a function of various demographic and structural factors, such as lower socio-economic status, immigrant status, lower rates of marriage, and lower health status (Keene \& Baston, 2010). Furthermore, in 2000 over 500,000 African-American grandparents over the age of forty-five were estimated to be raising grandchildren (Minkler \& FullerThomson, 2005), with grandmothers shouldering more of this caregiving (Hunter, 1997).

Historically, most families engaged in multigenerational housing until the Industrial Revolution. Multigenerational households declined dramatically between 1850 and 2000 from $70 \%$ of all U.S. households to $15 \%$ due to increased opportunities for young people to establish independent, or "nuclear," housing (Keene \& Baston,

2010; Ruggles, 2007). However, the U.S. Census Bureau has reported a slight increase in the prevalence of multigenerational households from 2000 to 2010. In 2000, there were approximately 3.9 million multigenerational households making up $3.7 \%$ of all households (U.S. Census Bureau, 2001). This increased to $4.4 \%$ of all households, with approximately 5.1 million multigenerational households in 2010 (U.S. Census Bureau, 2012).

Not only has there been an increase in multigenerational modes of living, but there has also been an increase in custodial grandparenting (Choi et al., 2016). From 1970 to 1997 the number of grandchildren living in households maintained by grandparents with no parents present increased by $37 \%$ and from 1990 to 1998 this category saw the greatest growth in comparison to other family structures with grandparents present as main caregivers (U.S. Census Bureau, 1998). In 2000 1.3\% of all households were grandparent-headed with no parents present (U.S. Census Bureau, 2003) and has remained relatively stable from 2000 to 2012 (U.S. Census Bureau, 2014). Grandparent involvement varies by the type of co-residence experienced. Grandparents with sole custody are the most involved with their grandchildren, followed by grandmothers co-residing with single mothers. Grandparents who co-reside with two parents are the least involved of co-residing grandparents since the parents take on more active roles with children than grandmothers do (Pearson et al., 1997).

## Grandparents as Agents of Socialization

Given the increase in multigenerational housing and custodial grandparenting, as well as increases in life expectancy that facilitate lengthier and perhaps more meaningful grandparent-grandchild relationships over the life course, researchers have
identified the transmission of values and beliefs from grandparents to grandchildren as an important aspect of family socialization. Qualitative research has indicated that grandparents are key carriers of identity and traditions for the family with respect to religiosity, racial identity, and gender roles (Drywater-Whitekiller, 2006; McAdoo \& McWright, 1995; McWright, 2002; Mulder, 2012).

Several studies, most notably by Vern Bengtson and his team, have identified grandparents as influential for grandchildren's religiosity (independent of value transmission that comes from their parents). The relationship between grandparents' and grandchildren's religious beliefs is stronger for grandmothers and granddaughters, and the strength of this relationship has increased over time with respect to conservative religious beliefs (Bengtson et al., 2009; Copen \& Silverstein, 2007).

In addition, qualitative research has shown that grandparent co-residence influences intergenerational religious socialization, as grandmothers residing in multigenerational households expressed intentions to socialize their grandchildren into faith, regardless of differences in values of their own children (Mulder, 2012). Not only do grandparents have influence on the actual values of their grandchildren, but this study shows that grandparents also may have an expressed intent to socialize their grandchildren in a certain way. Ultimately, these findings indicate that grandparents do have an influence on their grandchildren's values and ideologies, and that co-residence influences grandparents' intent to pass these values on to their grandchildren. These findings inform parallel inquiries into the process of gender ideology socialization within the grandparental context as informed by co-residence, while also underscoring
the need for research that investigates the intergenerational transmission of gender ideology from grandparents to grandchildren.

## Predictors of Gender Ideology

Family influences have been cited as predictors of gender ideology, though much research has focused on parents (Carlson \& Knoester, 2011; Cunningham, 2001; Filler \& Jennings, 2015; Marks et al., 2009). While mothers are key socializers of gender ideology, both mother's and father's ideology are positively associated with that of their children (Bolzendahl \& Myers, 2004; Davis \& Wills, 2010; Moen et al., 2007). Parents influence their children through direct interaction, modeling behavior, and through the construction of the home environment (Davis \& Greenstein, 2009).

Individual socio-demographic characteristics have been shown to influence gender ideology. For example, studies have shown that women tend to have more egalitarian gender ideology than men (Davis \& Greenstein, 2009; McDaniel, 2008). Studies also have documented racial-ethnic variations in women's and men's gender ideology. While past research has produced contradictory findings (Schnittker et al., 2003), most studies have found that racial differences do occur between white and African Americans in that African Americans are more critical than whites in regards to the extent and origins of gender inequality and the social action required to reduce inequality (Bolzendahl \& Myers, 2004; Carter et al., 2009; Kane, 2000). Furthermore, African American men hold less traditional attitudes towards working mothers than do white men (Carter et al., 2009; Davis \& Greenstein, 2009). More recent findings indicate that racial and ethnic minority women were no less likely than non-Hispanic white heterosexual women to have gender egalitarian ideology, but that perceptions of
racial and ethnic inequality and discrimination against sexual minorities assist in producing a gender egalitarian ideology, regardless of race, and that racial and ethnic minorities may have increased opportunities to experience and acknowledged inequality (Harnois, 2015).

Age has been shown to influence gender ideology in that younger women are more supportive of feminist ideologies than older women due to cohort effects (Bolzendahl \& Myers, 2004; Pampel, 2011). Education is associated with increased gender egalitarianism for both women and men (Bolzendahl \& Myers, 2004; Campbell \& Horowitz, 2016; Davis \& Greenstein, 2009). Political affiliation is often related to gender ideology and scholars cite it as an important factor to account for in research on gender ideology (Bolzendahl \& Myers, 2004; Coffe \& Bolzendahl, 2010). Labor force participation and income influence gender ideology in various ways for both men and women (Bolzendahl \& Myers, 2004; Cha and Thébaud, 2010; Davis \& Greenstein, 2009; Kroska \& Elman, 2009). Marriage also shapes gender ideology, where divorced or separated individuals have been found to be more egalitarian than their married counterparts in some studies (Bolzendahl \& Myers, 2004; Davis \& Greenstein, 2009).

## Theoretical Perspectives

In addition to the reviewed literature on intergenerational relationships and patterns of socialization, as well as factors associated with formation of individuals' gender ideology, this study draws upon the exposure theory of gender socialization as a framework useful for examining grandparents' gender ideology socialization. Furthermore, this study uses the theory of intergenerational solidarity to assist in the
efficacy of exposure theory in anticipating mechanisms of exposure for gender ideology socialization in the context of family structure.

Exposure-based explanations of gender ideology construction hold that being exposed to egalitarian or traditional ideology, whether through ideas or situations, will lead to the development of more or less egalitarian ideology. Socialization, education, and personal experience all form exposures to gender ideology (Bolzendahl \& Myers, 2004; Davis \& Greenstein, 2009; Kroska \& Elman, 2009). Although a large literature shows that parents engage in the gender socialization of their children (Carlson and Knoester, 2011; Cunningham 2001a, 2001b; Gupta 2006; Kane 2006), far less attention has been paid to the role that grandparents may play in transmitting their beliefs about gender with their grandchildren. Given increases in life expectancy, as well as the expanding caregiving role of grandparents, I expect that grandparents play a role in shaping grandchildren's gender ideology via exposure to grandparents' beliefs about women's and men's roles in family, work, and social life.

Grandparents' transmission of gender beliefs to their grandchildren may also be affected by the extent to which these relationships are characterized by intergenerational solidarity. The theoretical construct of intergenerational solidarity aims to characterize the relationship between family members through six conceptual dimensions of solidarity (e.g., affectual, associational, functional, normative, and structural), which indicate ties that are stronger and more durable to life's adversities (Bengtson, 2001). Affectual solidarity concerns closeness felt between family members such as feelings of love, shared understanding of one another, and affection. Associational solidarity concerns the contact between family members, both in type and frequency. Contact
between grandparents and grandchildren may include how often grandparents and grandchildren do activities together, see each other at family events, or talk on the phone. Functional solidarity concerns assistance given and received across generations. When grandchildren are young, grandparents may provide more functional assistance to their grandchildren. However, as grandchildren reach maturation, one could envision these transfers of assistance reversing direction, from grandchildren to grandparents. Normative solidarity concerns obligations to family members, such that individuals with high normative solidarity place importance on family and parental obligations and place value on their family as a unit. Lastly, structural solidarity is defined as geographic proximity between family members, leading to the opportunity for crossgenerational interaction. One could envision proximity between grandparents and grandchildren encompassing both living near one another, or even co-residing in a multi-generational living arrangement.

Affectual solidarity, associational solidarity, and structural solidarity each connote mechanisms of exposure, indicating the solidarity model of intergenerational relationships is compatible with exposure-based explanations of gender ideology socialization when examining family processes. No study has integrated these theories and few have examined degrees of exposure. Therefore combining these theories provides a unique contribution to both literatures on family structure and gender ideology socialization by merging these theories in the methodology of this study.

## Statement of the Problem

Existing research has shown that grandparents have an influence on the values and ideologies of their grandchildren, but little research has been done to examine this
relationship in regards to gender ideology. This study will examine the influence of grandparents on two dimensions of grandchildren's gender beliefs: marital power and women's labor force participation. Based on these dimensions, the following hypothesis will be tested:
$H_{1}$ : Grandparents influence grandchildren's working mother ideology, net of parents.
$H_{2}$ : Grandparents influence grandchildren's marital power ideology, net of parents.

In order to examine the exposure theory of gender socialization, this study will examine mechanisms of exposure parallel to concepts of intergenerational solidarity to see whether these mechanisms operate as moderators of the influence of grandparents on grandchildren. First, I will compare measures of affectual solidarity regarding closeness and associational solidarity regarding contact using the following hypotheses:
$H_{3}$ : Grandparent influence is moderated by affectual solidarity, with higher levels of grandparent closeness increasing the strength of grandparental influence.
$H_{4}$ : Grandparent influence is moderated by associational solidarity, with higher levels of grandparental contact increasing the strength of grandparental influence.

Next, I will examine two measures of structural solidarity by comparing co-residence to distance proximity as opportunities for exposure using the following hypotheses:

H5: Grandparent influence is moderated by structural solidarity as proximity, (i.e., living within 50 miles of a grandparent increases the strength of grandparental influence).
$H_{6}$ : Grandparent influence is moderated by structural solidarity as co-residence (i.e., co-residence with a grandparent increases the strength of grandparental influence).

Using these concepts, I aim to show first if particular dimensions of gender ideology are passed from grandparent to grandchild, and if so, how this socialization occurs using the exposure theory of socialization in the context of intergenerational solidarity.

## Method

## Data

To examine the transmission of gender ideology between grandparents and grandchildren, this study will draw from the Longitudinal Study of Generations (LSOG), a panel study of families designed to specifically study intergenerational ties, collected by Vern Bengtson and his team of researchers. Given my focal research questions, which require identical measures of grandparent, parent, and grandchild gender ideology over time, these data are uniquely positioned to investigate the role that grandparents play in socializing their grandchildren to gender ideology. Individuals from the first generation were randomly selected from males on a subscriber list in 1970 of 840,000 members of a health maintenance organization in the Los Angeles area.

Over 2,000 family members responded to the original self-administered questionnaire, which was sent via post to the first generation and their spouses (G1), their children
(G2), and their grandchildren aged 16 or older (G3). The respondents in 1970 were representative of white, working, economically stable middle-class families.

Eight waves of data were subsequently collected from these families in 1971, 1985, 1988, 1991, 1994, 1997, 2000, and 2005. The first three waves (1971-1988) contained data on the first, second, and third generations. Since 1991, the study has collected data from new spouses, as well as great-grandchildren (G4) who have reached 16 years of age. Participants remain in the study even in the case of divorce. The response rate has ranged from $65 \%$ (between the first and second waves) to an average of $74 \%$ for subsequent waves of data collection. No new families were added to the study given that attrition has been relatively low (Bengtson, 2012).

## Sample

This study draws on data from waves 5 through 8 because the focal dependent variable (gender ideology) is only assessed starting at wave 5 . The sample of interest for this study was constructed by creating grandparent-parent-grandchild triads. To maximize the sample population, both G1-G2-G3 and G2-G3-G4 triads are included in the sample ${ }^{1}$. In total, there are 1,384 grandchildren (G3 and G4) in wave 8 and 1,427 in wave 7. Because parents may have multiple children, parents and grandparents may be oversampled, however, past research utilizing the LSOG and similar sampling procedures have found no significant increases or decreases in the predictability of the data (Bengtson, 2009). Grandchildren were chosen based on if they had valid data for either dimension of gender ideology in either wave eight (2005) or wave seven (2000). Parents identified in the wave for which gender ideology was measured were matched

[^0]to grandchildren, who identified their parent using a subject code that when paired with a unique family code connected the parent and grandchild. Grandparents were matched in the same manner. The final sample is 417 when measuring the marital power dimension of gender ideology, 461 when measuring the working mother dimension of gender ideology, and 338 for affectual and associational measures of solidarity. Because valid data is required for all three generations, quite a few cases are removed from the original sample.

## Measures

## Dependent Variables

My primary dependent variable is grandchild's gender ideology. Gender ideology is measured using two dimensions: working mother ideology and marital power ideology. As stated above, grandchildren were chosen for the sample based on whether or not they had valid data for either dimension of gender ideology. A scale was created for each dimension, which I discuss below. I began by creating both grandchild gender ideology scales using data from Wave 8 . For cases that were missing valid data in Wave 8, I used information on grandchildren's gender ideology from Wave 7. In instances where a grandchild was missing valid data on one of the two gender ideology scales in Wave 8, I used Wave 7 data to create both gender ideology scales so that they were assessed in the same time wave (time period).

Working mother ideology for the grandchild is measured using the Working Mother Scale, comprising of three items. The first item assesses agreement or disagreement with the statement: "Preschool children are likely to suffer if their mother is employed." The second item assesses agreement or disagreement with the statement:
"The increase in the number of women who work has led to a decline in the quality of family life." The third item assesses agreement or disagreement with the statement: "A woman who places more importance on her career than being a mother is denying her nature." All three items contain the following responses: 1 for strongly agree, 2 for agree, 3 for disagree, and 4 for strongly disagree so that high values indicate more gender egalitarian ideology. I use a mean-item scale strategy, so that cases missing valid data on one of the three items are retained, but averaged by the number of items that they contribute (e.g., two instead of three). A Cronbach's alpha of 0.79 for wave 8 and 0.76 for wave 7 indicate that this scale is reliable to measure support of working mothers as a dimension of grandchild gender ideology.

Marital power ideology is measured using the Marital Power Scale comprising of two items. Research concerning acceptance of male privilege in the context of marriage has conceptualized "marital power" as an appropriate term for the distribution of power within a marital relationship (Davis \& Greenstein, 2009; Tichenor, 2005). The first item assesses agreement or disagreement with the statement: "Some equality in marriage is a good thing, but by and large, the husband ought to have the main say in family matters." The second item assesses agreement or disagreement with the statement: "Women who want to remove the word "obey" from the marriage service don't understand what it means to be a good wife." Each item contains the following responses: 1 for strongly agree, 2 for agree, 3 for disagree, and 4 for strongly disagree. Again, high scores indicate more gender egalitarian ideology. Respondents must have valid responses for both items in order to be included in the scale. A Cronbach's alpha
of 0.72 for wave 8 and 0.73 for wave 7 indicate that this scale reliably measures marital power ideology as a dimension of gender ideology.

## Independent Variables

Due to the nature of data collection, identical measures of gender ideology (i.e., the Working Mother Scale and the Marital Power Scale) are also available for grandparents and parents in waves 5 through 8 , which is a primary strength of the LSOG data. Consequently, grandparental ideology will be used as the focal independent variable in this analysis. Because part of the influence of grandparents may operate via parental gender ideology, I will also include parental measures for each scale in the analysis.

Grandparents' gender ideology is measured using the same dimensions as grandchildren. In order to meet the temporal order condition necessary for causality, rather than sampling in the most recent wave, grandparent ideology is created from an average of any wave available preceding the wave in which their grandchild was sampled. For example, if a grandchild was sampled in Wave 8, their grandparents' ideology was averaged across waves 5-7. Grandparents only had to have one valid wave of data preceding their grandchild's to be included in this average. If a grandchild was sampled in Wave 7, grandparents' gender ideology is averaged from Waves 5 and 6. A Working Mother Scale and Marital Power Scale using the same items for grandchildren were first created for both grandmothers and grandfathers. All grandmother and grandfather scales have a Cronbach's alpha greater than 0.70 . Grandmothers' and grandfathers' scales were averaged to create a Grandparent Working Mother Scale and
a Grandparent Marital Power Scale. Only one grandparent had to have valid data to be included in the combined grandparent scale.

Parents' Working Mother Scale and Marital Power Scale are sampled in the same way as grandparents, using an average of any wave preceding that of their children back to wave 5 . Parents only had to have one wave preceding their child's to be included in this average. All mother and father scales have a Cronbach's alpha greater than 0.70 . Mothers' and fathers' scales were averaged to create a Parent Working Mother Scale and a Parent Marital Power Scale. Only one parent had to have valid data to be included in the combined parent scale.

## Moderating Variables

In order to test the exposure theory of gender socialization I investigate three types of exposure: affectual solidarity, associational solidarity, and structural solidarity through proximity and co-residence with either grandparent. Affectual solidarity, or closeness, is measured using six items asked of grandchildren regarding each grandparent ${ }^{2}$. The first item is perceived closeness: "Taking everything into consideration, how close do you feel is the relationship between you and your grandparent at this point in your life?" Responses range from 1, "not at all close," to 6, "extremely close." The second item is perceived communication: "How is communication between you and your grandparent - exchanging ideas or talking about things that really concern you at this point in your life?" Responses range from 1, "not

[^1]at all good" to 6, "extremely good." The third item is perceived similarity: "In general, how similar are your opinions and values about life to those of your grandparent at this point in time?" Responses range from 1, "not at all similar," to 6, "extremely similar." The fourth item asks how well grandchildren get along with grandparents: "Overall, how well do you get along with your grandparent at this point in your life?" Responses range from 1, "not well," to 6, "extremely well." The fifth item is perceived understanding of grandparents: "How well do you feel that you understand your grandparent?" Responses range from 1, "not well" to 6, "extremely well." Lastly, item six is perceived understanding from grandparents: "How well do you feel your grandparent understands you?" Responses range from 1, "not well," to 6, "extremely well."

Using the same procedure as grandparent gender ideology, a grandparental closeness scale was created for waves 5 through 7 for each grandparent. Cronbach's alpha for grandmother and grandfather scales in each wave are greater than 0.70 . For each grandparent, I then created an average of the waves preceding that of when their grandchild's gender ideology was measured. Each grandparent only had to have one wave of valid data to be included in the average. Grandparent closeness is created from an average of grandmother and grandfather closeness using at least one grandparent scale.

Associational solidarity, or grandparent contact is measured using in-person and phone contact for grandmothers and grandfathers. While e-mail and mail contact were considered, preliminary analyses indicated that excluding these measures increased the scale's reliability. In-person contact is measured with responses to the question,
"During the past year, how often were you in contact with your grandparent in person?" ranging from 1, "daily or more often," to 6, "not at all." Responses were reverse coded so that higher numbers indicated higher contact. Response categories were collapsed to account for changes in measurement over waves so that the final responses range from 1, "not at all" to 5, "every week or so." Phone contact is measured with responses to the question, "During the past year, how often were you in contact with your grandparent by phone?" with parallel responses to in-person contact. Responses were collapsed to account for changes in measurement over waves and final responses similarly range from 1, "not at all," to 5, "every week or so." As in-person and phone contact were highly correlated, a scale was created for each grandparent for each wave using at least one item out of the two. A scale average was created for waves 5 through 7 for each grandparent using at least one wave preceding the wave for which grandchild ideology is measured. A grandparent average was created from the scale averages of at least one grandparent.

Structural solidarity is measured using proximity and co-residence. Proximity is measured as the distance from which the grandchild has typically lived from their grandparent. Grandchildren are asked "How far do you live from your grandmother?" and "How far do you live from your grandfather?" in waves five through eight. The responses range from the following: "We live together," "Less than 5 miles from me," " $5-50$ miles from me," "51-150 miles from me," "151-250 miles from me," "251-500 miles from me," and "More than 500 miles from me." This variable was collapsed into a dichotomous measure with 1 being " 50 miles or less" and 0 being " 51 or more miles." A dummy variable for "Ever lived 50 miles or less from either grandparent" was
created. If a grandchild lived within 50 miles of either grandparent in any wave preceding the wave in which their gender ideology was assessed, they received a 1. All other grandchildren were coded as 0 . Co-residence is also measured as a dichotomous variable with 1 being ever lived with either grandparent for any amount of time. This information was collected using a variety of questions asked of grandchildren in the waves preceding the wave in which their gender ideology was measured to determine if the grandchild resided with either grandparent at any point in time.

## Control Variables

Political ideology, education, family context, socio-demographics, and sample characteristics of grandchildren are incorporated into the analysis based on predictors of gender ideology and influences on family socialization identified in past studies of intergenerational socialization. Descriptive statistics for these variables can be found in Table 1. Political ideology is measured from the wave for which respondent gender ideology is measured using the responses to the following question: "On a scale from "very liberal" to "very conservative," how would you rate your political views or opinions?" Responses range from 1, "very liberal," to 5, "very conservative." Responses were collapsed into 1, "liberal," 2, "moderate, and 3, "conservative." For analysis, dummy variables of liberal and conservative are compared to a reference category of moderate.

Respondent education is measured in the same wave as gender ideology is measured using the highest level of education achieved. Responses are, "some high school," "high school or vocational degree," "specialized technical, business, or other degree," "some college," "college or university graduate," "one or more academic years
beyond college," or "post-graduate degree." These responses were collapsed into "no high school degree," "high school or vocational degree," and "college degree." For analysis, dummy variables of high school and college degree are compared to a reference category of no high school degree.

Mother's highest level of education is measured in the same wave as respondent gender ideology and contains the same response categories as respondent education. Since $42 \%$ of grandchildren do not report their mother's education, a dichotomous variable was created for the entire sample where 1 is where respondent's mother has a college degree. Father's highest level of education is measured in the same wave as respondent gender ideology and contains the same response categories as respondent education. Since $66 \%$ of grandchildren do not report their father's education, this variable was measured parallel to mother's education. Because of these high nonresponse rates, dichotomous variables for missing mother and father's education were included in analysis. However, these variables were not statistically significant.

Four different aspects of family context were controlled for in analysis: marital status, presence of children, residence with parents, and parental divorce. Marital status is measured in the wave respondent gender ideology is measured using an existing dichotomous variable with 1 being currently married. Presence of children is measured in the wave respondent gender ideology is measured using an existing dichotomous variables with 1 indicting the respondent has at least one child. Residence with parents is measured using existing dichotomous variables with 1 being currently living with any parent including their mother, father, step-mother, or step-father. Respondents are asked to check all that apply for who they currently live with, therefore, a 1 on any of these
items is coded as 1 for parental residence and 0 for all other respondents in the sample for the wave in which their gender ideology is measured. Parental divorce is measured using an existing dichotomous variable with 1 being "parents ever divorced," and is measured in the wave in which respondent gender ideology is measured.

Standard socio-demographic characteristics are included in the model which include gender, age, race-ethnicity, employment status, and household income. Gender is measured in the wave in which gender ideology is measured, with 0 being male and 1 being female. Age is a continuous variable and was derived from the year the respondent was born and the wave for which their gender ideology is measured. Raceethnicity is open-ended, and therefore respondents can provide up to six racial-ethnic identities for which they self-identify. Each of the six racial identity variables were coded into "White,"" "Black," "Hispanic," "Asian," "Pacific/Islander," "Native American," and "Other." Differences across six identity variables were recoded into "Other." Because only $11 \%$ of cases fall under non-white racial-ethnic identities, a dichotomous variable was created for analysis where 1 is "non-white" and 0 is "white." Racial-ethnic identity is measured in the wave for which gender ideology is measured.

Employment status is measured using an existing dichotomous variable for which 1 is employed and 0 is unemployed for the wave in which gender ideology is measured. Income is measured using household income in the wave for which gender ideology is measured. The categories of "under $\$ 10,000$ " "at least $\$ 10,000$ " "at least $\$ 20,000$ " and so on increasing by $\$ 10,000$ up to "at least $\$ 190,000$ " and " 200,000 or more." A quartile measure of income was created and categories collapsed so that the first quartile measures income from $\$ 0-\$ 10,000$, the second quartile measures income
from $\$ 20,000$ to $\$ 40,000$, the third quartile measures income from $\$ 50,000-\$ 70,000$, and the fourth quartile measures income above $\$ 80,000$. Lastly, because about $21 \%$ of respondents were sampled in wave seven, a dummy variable for sample wave accounts for period effects. A dichotomous variable was created where 0 indicates respondent gender ideology is measured in wave 8 (2005) and 1 indicates respondent gender ideology is measured in wave 7 (2000).

## Analytic Design

I use OLS regression to examine the transmission of gender ideology from grandparents to grandchildren, which I view as the residual effect that grandparent gender ideology has on grandchild gender ideology, controlling for other factors. For my focal analyses, I estimate three parallel sets of models that investigate the relationship between grandparent and grandchild gender ideology. First, I estimate the bivariate association between grandparent and grandchild ideology. Next, Model 2 introduces parent gender ideology, since part of the association between grandparent and grandchild gender ideology may operate via parents' influence. Finally, in Model 3, I add controls pertaining to political ideology, education, socio-demographics, and family context. In supplemental models that examine the effects of intergenerational solidarity I additionally introduce measures of affectual (closeness), associational (contact), and structural (proximity and co-residence) solidarity to investigate the extent to which these domains of intergenerational solidarity mediate the relationship between grandparent and grandchild gender ideology. Lastly, I investigate the possibility of moderating effects by including interactions between each type of intergenerational solidarity and grandparent gender ideology.

## Results

## Analyses of the Association between Grandparent and Grandchild Gender

 IdeologyTable 1 presents descriptive characteristics for grandchildren and gender ideology for parents and grandparents, along with control variables. Due to patterns of missing data, my primary analyses (of the working mother and marital power scales), and supplemental analyses (of associational and affectual solidarity) draw from different samples. Thus, I present descriptive statistics across all analytic samples.

I first will discuss trends across generations in gender ideology across the three samples. By comparing grandchildren to parents and grandparents, it can be seen that gender ideology patterns have shifted across the three generations. Grandchildren have the most progressive gender ideology for both the Working Mother Scale and the Marital Power Scale while grandparents have the least progressive gender ideology for both scales. While there are slight differences across generations, averages for each generation indicate that respondents generally fall somewhere between agree and disagree for support of working mothers, indicating an overall neutral support for this dimension of gender ideology. In contrast, respondents on average disagree to strongly disagree that men should have primary power in marriage, indicating that the sample is skewed toward gender egalitarian views for this dimension of gender ideology.

In order to test whether or not grandparents influence two dimensions of their grandchildren's gender ideology, I use grandparent-parent-grandchild triads (G1, G2, G3 and G2, G3, G4) to estimate a series of OLS regression models using grandparent and parent gender ideology to predict grandchild gender ideology. Separate models are
estimated for each dimension of gender ideology (working mother scale and marital power scale). I controlled for parents' gender ideology, as well as grandchild political ideology, education, mother's education, father's education, grandchild's marital status, if the grandchild has any children, if the grandchild currently lives with their parents, if their parents were ever divorced, age, racial-ethnic identity, employment status, household income, and whether they were sampled in wave 7 (2000) or wave 8 (2005). Results are shown in Table 2.

For working mother ideology, it was found that grandparents significantly influenced their grandchildren's ideology in bivariate analysis for Model 1. This effect decreases by approximately 50 percent when parents are introduced in Model 2, but is still statistically significant. Net of parents and other control variables, grandparents still significantly influence their grandchild's ideology so that for every unit increase in working mother ideology, grandchild's ideology increases by 0.13 (Model 3).

Therefore, my first hypothesis is supported. Grandparents do significantly influence their grandchild's gender ideology in terms of support for working mothers, net of parental influence and controls.

In terms of the transmission of marital power ideology, grandparents have a significant influence on their grandchildren in bivariate analysis shown in Model 4. Controlling for the influence of parents' gender ideology, the effect of grandparents' gender ideology on grandchild's gender ideology is smaller, and this relationship is significant at $\mathrm{p} \leq 0.10$ (Model 5). Lastly, when controls are introduced into the model, grandparent ideology is no longer statistically significant. My second hypothesis is not
supported. Grandparents do not significantly influence their grandchild's gender ideology in terms of marital power, net of parental influence and controls.

Because I do not observe a statistically significant association between grandparents' and grandchild's gender ideology with respect to the marital power scale in the multivariate model (Model 6), I do not explore mechanisms and moderators of socialization for this dependent variable. Instead, I limit my supplemental analyses, which investigate the mediating and moderating role of each dimension of intergenerational solidarity, to examination of the working mother scale.

## Supplemental Analyses: Intergenerational Solidary and the Transmission of

## Gender Ideology

Utilizing the exposure theory of socialization in combination with intergenerational solidarity, Table 3 includes measures of affectual solidarity (closeness) and associational solidarity (contact), in addition to all other control variables to investigate the extent to which these variables may mediate and moderate the effects of grandparental ideology on grandchildren's gender ideology. Due to patterns of missing data on measures of intergenerational solidarity, these analyses draw on a sub-sample of respondents who were analyzed in the focal analyses presented in Table 2. Compared to the broader sample associated with the working mother scale, this sub-sample is comprised of slightly more women, is moderately better educated, and is slightly less likely to have experienced parental divorce and to currently reside with parents. However, the gender ideology of grandparents, parents, and children are remarkably similar to the broader sample examined in Table 2.

Model 7 and Model 8 test the effect of affectual solidarity, or grandparental closeness, on the effect of grandparental gender ideology on that of their grandchildren. Grandparental closeness does not significantly predict gender ideology, although taking this factor into account does moderately strengthen the association between grandparent and grandchild gender ideology compared to Model 3 (Model 7). However, when an interaction between grandparental closeness and grandparent gender ideology is included, we can see that the effect of grandparental gender ideology varies according to the level of closeness between grandparent and grandchild. For grandchildren that who were least close to their grandparents, there is a significant and inverse association between grandparent and grandchild gender ideology, such that a one unit increase in grandparent gender ideology decreases grandchild gender ideology by -0.34. [-0.55 + $(0.21 * 1)=-0.34]$. In contrast, among grandchildren who were closest to their grandparents (e.g. had the highest value on the grandparent closeness scale), there was a significant and positive association between grandparent and grandchild gender ideology. Among this group, a one unit increase in grandparent gender ideology was associated with a 0.61 increase in grandchild gender ideology $[-0.55+(0.21 * 5.5)$ $=0.61]$.

We can conclude that Hypothesis 3 concerning the moderation by affectual solidarity is supported. Affectual solidarity, or closeness, moderates the relationship between grandparent and grandchild ideology. Among grandchildren who are closest to their grandparents, there is a strong and positive association between grandparent and grandchild gender ideology. However, among grandchildren who are not close to-and possibly even estranged from their grandparents - there is a significant and negative
association between grandparent and grandchild gender ideology. Among grandchildren who have moderately close relationships to their grandparent (e.g., 3 on a scale of 1 to 6 ), there is not a statistically significant association between grandparent and grandchild ideology $[-0.55+(0.21 * 3)=0.08]$.

Models 9 and 10 assess moderating effects of associational solidarity, or grandparental contact, on the effect of grandparent ideology on grandchild ideology. As shown in Model 9, there is no statistically significant association between associational solidarity (e.g. contact between grandparents and grandchild) and grandchildren's gender ideology. However, accounting for this form of structural solidary decreases the association between grandparent and grandchild gender ideology very slightly, lowering the level of significance to $\mathrm{p} \leq 0.10$. While moderating effects were found for grandparental closeness, there is no evidence that the association between grandparent and grandchild ideology varies according to the level of associational solidarity (contact). Therefore, we must reject Hypothesis 4.

Table 4 contains OLS regressions testing the moderating effects of two dimensions of structural solidarity which may lead to increased exposure to grandparents' gender ideology: grandparental proximity and grandparental coresidence. The effect of grandparental proximity, or ever living within 50 miles of a grandparent, is tested in models 11 and 12 . Grandparent proximity is significantly and positively associated with grandchildren's gender ideology, as shown in Model 11. After taking into account the role of grandparent proximity, the association between grandparent and grandchild gender ideology is marginally reduced, such that the level of significance declines to $\mathrm{p} \leq 0.10$. However, as shown by the lack of a statistically
significant interaction in Model 12, I do not find evidence that the effects of grandparent gender ideology are moderated by living closer to one's grandparents. Therefore, we must reject Hypothesis 5 due to the fact that grandparental proximity does not strengthen the relationship between grandparent and grandchild gender ideology as predicted.

Given the rise in multigenerational households and potential implications for coresidence in the context of exposure-based theories of gender socialization, models 13 and 14 address the potential for moderating effects of co-residence with a grandparent on the effect of grandparent ideology on their grandchildren. Model 13, which adds grandparent co-residence, shows that grandchildren who co-resided with a grandparent at some point had slightly more gender egalitarian gender ideology than those who never co-resided with a grandparent, although this result is significant at $\mathrm{p} \leq 0.10$. Adding grandparent co-residence does not significantly change the association between grandparent and grandchild gender ideology, however. Model 14 addresses the possibility that the association between grandparent and grandchild gender ideology may vary between those who did and did not co-reside with their grandparents. The lack of a statistically significant interaction term indicates that grandparental co-residence does not moderate the relationship between grandparent and grandchild gender ideology. Therefore, we must reject Hypothesis 6, as co-residence neither affects the strength nor the direction of the influence of grandparent ideology on that of their grandchildren.

## Discussion

Much is known about the process of gender ideology formation, especially as far as parents are concerned (Bolzendahl \& Myers, 2004; Carlson \& Knoester, 2011; Cunningham, 2001a, 2001b; Davis \& Greenstein, 2009; Davis \& Wills, 2010; Filler \& Jennings, 2015; Gupta, 2006; Kane, 2006; Marks et al., 2009; Moen et al., 2007). However, we know considerably less about how grandparents inform this process. The relationship between grandparents and grandchildren is an important and unique form of extended family, and because of this warrants better understanding of these ties, particularly in the light of recent structural changes in life expectancy and family composition (e.g., increase of multigenerational families and households) (Bengtson, 2011; Bengtson, 2001; Casper \& Bianchi, 2002; Choi et al., 2016; Keene \& Baston, 2010; Minkler \& Fuller-Thomson, 2005; Ruggles, 2007; U.S. Census Bureau, 2012, 2001). This study is uniquely positioned to offer insight into this process because it samples multiple generations of the same family, which allows for simultaneous investigation of the effects of the transmission of gender ideology from grandparent to grandchild, while controlling for the effects of parents' gender ideology socialization.

My study offers insight into the process by which grandparents engage in gender ideology socialization of their grandchildren, controlling for the influence of parents. My findings suggest that the intergenerational transmission process of gender ideology from grandparents to grandchildren is complicated, especially after taking mechanisms of exposure and intergenerational solidarity into account. To summarize my findings, my study suggests that grandparents may communicate some messages about gender beliefs more strongly than others. For example, I found that, controlling for the influence of parents and other covariates known to influence attitudes about gender,
grandparent gender ideology was positively and significantly associated with that of their grandchildren on the working mother dimension of gender ideology. This is consistent with the exposure theory of gender socialization in that exposure to more egalitarian gender ideology through the ideas of their grandparents can lead to more egalitarian views for grandchildren (Bolzendahl \& Myers, 2004; Davis \& Greenstein, 2009; Kroska \& Elman, 2009). However, my results suggest that grandparents may not be communicating as many ideas pertaining to women's and men's roles in marriage, as I did not identify a statistically significant association between grandparents' and grandchildren's gender ideology for the marital power dimension.

Some scholars have suggested that gender beliefs may be most salient in instances where children are involved (Risman, 1999), thus it is possible that grandparents' gender ideology may be targeted towards women's and men's roles as parents, rather than their roles as spouses. Furthermore, grandparents may be more influential in terms of attitudes towards work, mothering, and childrearing due to the potential role that grandparents play in all of these aspects of the working mother dimension. Grandparents may assist when mothers are working, are connected to their grandchildren through parenthood and mothering, and often assist with the childrearing of their grandchildren. In contrast, grandparents may not be as influential in the marital power dimension of their grandchild's gender ideology due to other societal factors. However, it is also possible that grandparents are communicating ideas pertaining to gender and marriage and that I fail to identify these associations due to measurement error. There was considerably less variation in my scale of marital power compared to my working mother scale, as respondents had more egalitarian views toward power in
marriage, on average, and opinions about power within marriage may be informed beyond this family relationship.

When isolating dimensions of exposure and intergenerational solidarity, my study suggests that affectual solidarity, or grandparental closeness, is an important consideration in understanding the process by which grandparents socialize their grandchildren to ideologies and beliefs, at least with respect to gender ideology (Bengtson \& Roberts, 1991; Roberts \& Bengtson, 1990). My findings suggest that among grandparents and grandchildren who share high levels of affectual solidarity (or closeness of the relationship), there is a strong and significant association between grandparent and grandchild gender ideology. However, my findings also suggest that the transmission of gender ideology from grandparent to grandchild is weaker among grandparent-grandchild dyads who have ties characterized by lower levels of closeness. Furthermore, among grandchildren who were least close to their grandparents-and who may even have strained relationships with their grandparents-I find evidence that there may be a significant and inverse association between grandparent and grandchild gender ideology. The moderating effect of affectual solidarity on grandparentgrandchild transmission of gender ideology certainly merits further inquiry. In future iterations of this work, I plan to explore 'categories' of grandparent-grandchild closeness (e.g., high, moderate, low levels of closeness between grandparents and grandchildren), as well as predicted values according to levels of gender ideology, to further unpack the nature of relationship.

In contrast, I found no evidence that associational solidarity (grandparent contact) influences the transmission of gender ideology between grandparent and
grandchild, nor evidence that this form of intergenerational solidarity moderates the relationship between grandparent and grandchild gender ideology. This suggests that affectual solidarity, or closeness, is more of a contributing factor to intergenerational gender ideology socialization than is associational solidarity, or contact. Furthermore, my study also investigated two dimensions of structural solidarity (proximity and coresidence), which I hypothesized may increase exposure to grandparents and thus strengthen the association between grandparent and grandchild gender ideology. While my results suggested no evidence that either of these dimensions of structural solidarity moderate the relationship between grandparent and grandchild gender ideology, findings do suggest that both proximity to grandparents and grandparental co-residence are significantly and positively associated with grandchild gender ideology. Furthermore, after accounting for both of these forms of structural solidarity, my findings regarding the significant and positive association between grandparent and grandchild gender ideology remained intact. Taken together, these findings lend support to the idea that exposure to grandparents through residential patterns, as well as exposure to grandparent ideology, influences grandchild gender ideology.

Although the Longitudinal Study of Generations offers the best data, to our knowledge, to investigate processes of intergenerational transmission gender ideology from grandparents to grandchildren, these data are not without limitations. First, the data draw on disproportionately white families from middle-class backgrounds, sampled from a particular area of the country. Past studies have shown both racial-ethnic variations and socio-economic variations in gender beliefs as well as family structures and living arrangements (Bolzendahl \& Myers, 2004; Brewster \& Padavic, 2004;

Campbell \& Horowitz, 2016, Carter et al., 2009; Casper \& Bianchi, 2002; Cha \& Thébaud, 2009; Choi et al, 2015, 2016; Coffe \& Bolzendahl, 2010; Creasy \& Koblewski, 1991; Davis \& Greenstein, 2009; Harnois, 2015; Kane, 2000; Keene \& Baston, 2010; Kennedy, 1990; Pearson et al., 1997; Ruggles, 2007; U.S. Census Bureau 2012, 2001). Therefore, there are theoretical reasons to believe that processes of intergenerational transmission and parental mediation of gender ideology-and other ideological beliefs for that matter-may vary by racial-ethnic and socio-economic background. Unfortunately, our data did not have sufficient sample size to investigate such possibilities. This is certainly an area that merits further inquiry, however. Lastly, due to restrictions in sample size, this study did not investigate the possibility that these processes vary by gender of grandchild, or of grandparent, though this is an area of future interest.

While future research may address limitations to these findings, this study is important in establishing grandparents as key actors in the lives of their grandchildren, particularly in regards to gender ideology. This study utilizes unique data to quantitatively assess the impact of grandparent-grandchild relationships and contributes to the literature on gender ideology socialization by integrating the theory intergenerational solidarity with the exposure theory of gender socialization, providing a unique theoretical contribution that no other study has provided. Furthermore, this study accesses a previously understudied aspect of gender ideology socialization by incorporating grandparents in the relationship between family and the formation of gender ideology. Many researchers have identified a plateau in the gender revolution, and while grandparents surely are not entirely the cause of this plateau, increased time
with aging family members with more conservative views, in addition to the inverse effects of not being close to a grandparent on grandchild gender ideology, may have some influence that research has not yet attended to (Cotter et al., 2011; Pedulla \& Thébaud, 2015).

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## Appendix A: Tables

Tables
Table 1. Comparison of Descriptive Statistics Across Samples (Mean/Percentages and Standard Deviation)

|  | Working Mother Scale <br> Sample | Marital Power Scale <br> Sample |  <br> Affectual Solidarity |
| :--- | :---: | :---: | :---: |
| N | 461 | 417 | 338 |
| Grandchild Working Mother Ideology | $2.65(0.74)$ |  | $2.70(0.77)$ |
| Grandchild Marital Power Ideology |  | $3.17(0.76)$ | $3.19(0.72)$ |
| Parent Working Mother Ideology |  |  | $2.45(0.68)$ |
| Parent Marital Power Ideology <br> Grandparent Working Mother Ideology | $2.27(0.51)$ | $3.22(0.63)$ | $3.23(0.64)$ |
| Grandparent Marital Power Ideology |  |  | $2.26(0.50)$ |
| Measures of Exposure and Solidarity |  | $3.00(0.49)$ | $2.99(0.49)$ |
| $\quad$ Grandparent Closeness |  |  |  |
| $\quad$ Grandparent Contact | $29.93 \%$ |  | $3.41(0.98)$ |
| $\quad$ Ever Lived 50 Miles From | $7.16 \%$ |  | $2.91(1.03)$ |
| $\quad$ Ever Co-resided With Grandparents |  |  |  |
| Political Ideology | $37.09 \%$ | $38.13 \%$ |  |
| $\quad$ Liberal | $33.19 \%$ | $34.05 \%$ | $37.87 \%$ |
| $\quad$ Moderate | $29.72 \%$ | $27.82 \%$ | $30.77 \%$ |
| $\quad$ Conservative |  |  | $31.36 \%$ |

Table 1. Continued

|  | Working Mother Scale <br> Sample | Marital Power Scale <br> Sample |  <br> Affectual Solidarity |
| :---: | :---: | :---: | :---: |
| Education |  |  |  |
| Grandchild Education | $4.77 \%$ | $4.80 \%$ |  |
| No High School Degree | $56.40 \%$ | $58.03 \%$ | $2.07 \%$ |
| High School Degree | $38.83 \%$ | $37.17 \%$ | $54.73 \%$ |
| College Degree | $22.56 \%$ | $21.34 \%$ | $43.20 \%$ |
| Mother Has College Degree | $18.44 \%$ | $17.03 \%$ | $22.78 \%$ |
| Father Has College Degree |  |  | $19.82 \%$ |
| Family Context | $56.11 \%$ | $56.04 \%$ | $57.14 \%$ |
| Currently Married | $36.66 \%$ | $35.97 \%$ | $35.80 \%$ |
| Any Children | $19.09 \%$ | $19.90 \%$ | $16.27 \%$ |
| Currently Live With Parents | $45.77 \%$ | $46.04 \%$ | $41.12 \%$ |
| Parents Ever Divorced |  |  |  |
| Socio-Demographics | $54.66 \%$ | $53.48 \%$ | $57.40 \%$ |
| Female | $27.32(5.62)$ | $27.22(5.55)$ | $27.26(4.48)$ |
| Age | $10.85 \%$ | $10.31 \%$ | $11.83 \%$ |
| Non-White Racial-ethnic Identity |  |  |  |

Table 1. Continued

|  | Working Mother Scale <br> Sample | Marital Power Scale <br> Sample |  <br> Affectual Solidarity |
| :--- | :---: | :---: | :---: |
| Employed | $80.26 \%$ | $81.06 \%$ | $80.18 \%$ |
| Total Household Income |  |  |  |
| $1^{\text {st }}$ Quartile (\$0-10,000) | $25.38 \%$ | $25.42 \%$ | $26.63 \%$ |
| $2^{\text {nd }}$ Quartile (\$20,000-\$40,000) | $31.24 \%$ | $31.65 \%$ | $32.54 \%$ |
| $3^{\text {rd }}$ Quartile $(\$ 50,000-\$ 70,000)$ | $20.17 \%$ | $19.66 \%$ | $19.23 \%$ |
| $4^{\text {th }}$ Quartile $(\$ 80,000+)$ | $23.21 \%$ | $23.26 \%$ | $21.60 \%$ |
| Sampled in Wave 7 | $20.61 \%$ | $20.38 \%$ | $16.86 \%$ |

Source: Longitudinal Study of Generations
Table 2. OLS Regression of Grandparents on Grandchild Gender Ideology

|  | Working Mother Ideology |  |  | Marital Power Ideology |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
| Grandparent Ideology | $\begin{aligned} & 0.34 * * * \\ & (0.07) \end{aligned}$ | $\begin{aligned} & 0.19 * * \\ & (0.07) \end{aligned}$ | $\begin{aligned} & 0.13^{*} \\ & (0.06) \end{aligned}$ | $\begin{aligned} & 0.20^{* *} \\ & (0.07) \end{aligned}$ | $\begin{aligned} & 0.12 \dagger \\ & (0.07) \end{aligned}$ | $\begin{aligned} & 0.04 \\ & (0.06) \end{aligned}$ |
| Parent Ideology |  | $\begin{aligned} & 0.30^{* * *} \\ & (0.05) \end{aligned}$ | $\begin{aligned} & 0.16^{* * *} \\ & (0.05) \end{aligned}$ |  | $\begin{aligned} & 0.33^{* * *} \\ & (0.06) \end{aligned}$ | $\begin{aligned} & 0.17^{* *} \\ & (0.05) \end{aligned}$ |
| Political Ideology ${ }^{1}$ |  |  |  |  |  |  |
| Conservative |  |  | $\begin{aligned} & -0.46^{* * *} \\ & (0.08) \end{aligned}$ |  | - | $\begin{aligned} & -0.53^{* * *} \\ & (0.08) \end{aligned}$ |
| Liberal |  |  | $\begin{aligned} & 0.25 * * * \\ & (0.07) \end{aligned}$ |  |  | $\begin{aligned} & 0.30 * * * \\ & (0.08) \end{aligned}$ |
| Education |  |  |  |  |  |  |
| High School |  |  | $\begin{aligned} & 0.06 \\ & (0.15) \end{aligned}$ |  |  | $\begin{aligned} & -0.10 \\ & (0.15) \end{aligned}$ |
| College Degree |  |  | $\begin{aligned} & 0.10 \\ & (0.16) \end{aligned}$ |  |  | $\begin{aligned} & 0.04 \\ & (0.17) \end{aligned}$ |
| Mother Has College Degree ${ }^{2}$ |  |  | $\begin{aligned} & -0.10 \\ & (0.08) \end{aligned}$ |  |  | $\begin{aligned} & 0.04 \\ & (0.09) \end{aligned}$ |
| Father Has College Degree |  |  | $\begin{aligned} & -0.13 \\ & (0.11) \end{aligned}$ |  |  | $\begin{aligned} & 0.15 \\ & (0.11) \end{aligned}$ |

Table 2. Continued

|  | Working Mother Ideology |  | Marital Power Ideology |  |
| :--- | :--- | :--- | :--- | :--- |
|  | Model 1 | Model 2 | Model 3 | Model 4 |
| Family Context | Model 5 | Model 6 |  |  |
| Currently Married |  |  |  |  |
|  |  |  |  |  |
| Any Children | -0.07 | 0.01 |  |  |
|  | $(0.08)$ | $(0.08)$ |  |  |
| Currently Live With Parents | $-0.15 \dagger$ | -0.08 |  |  |
|  | $(0.08)$ | $(0.08)$ |  |  |
| Parents Ever Divorced | 0.08 | 0.13 |  |  |
|  | $(0.10)$ | $(0.09)$ |  |  |
| Socio-Demographics | -0.07 | -0.001 |  |  |
|  | $(0.07)$ | $(0.07)$ |  |  |
| Female |  | $0.38^{* * * *}$ |  |  |
| Age | $0.11 \dagger(0.06)$ | $(0.06)$ |  |  |
|  |  | -0.001 |  |  |
| Non-White Racial-ethnic | 0.01 | $(0.01)$ |  |  |
| Identity | $(0.01)$ | -0.07 |  |  |
| Employed | -0.02 | $(0.11)$ |  |  |
|  | $(0.10)$ | $0.19^{*}$ |  |  |

Table 2. Continued

|  | Working Mother Ideology |  | Marital Power Ideology |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |

Table 3. OLS Regression of Affectual and Associational Solidarity on the Effect of Grandparent Working Mother Ideology on Grandchild Ideology

|  | Affectual Solidarity (Closeness) |  | Associational Solidarity (Contact) |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Model 7 | Model 8 | Model 9 | Model 10 |
| Grandparent Ideology | $\begin{aligned} & \hline 0.16^{*} \\ & (0.08) \end{aligned}$ | $\begin{gathered} -0.54^{*} \\ (0.27) \end{gathered}$ | $\begin{aligned} & 0.15 \dagger \\ & (0.08) \end{aligned}$ | $\begin{aligned} & 0.22 \\ & (0.22) \end{aligned}$ |
| Parent Ideology | $\begin{aligned} & 0.14^{*} \\ & (0.06) \\ & \hline \end{aligned}$ | $\begin{aligned} & 0.13^{*} \\ & (0.06) \end{aligned}$ | $\begin{aligned} & 0.14^{*} \\ & (0.06) \end{aligned}$ | $\begin{aligned} & 0.14^{*} \\ & (0.06) \end{aligned}$ |
| Grandparent Solidarity | $\begin{aligned} & \hline 0.02 \\ & (0.04) \end{aligned}$ | $\begin{aligned} & -0.46^{*} \\ & (0.18) \end{aligned}$ | $\begin{aligned} & 0.04 \\ & (0.04) \end{aligned}$ | $\begin{aligned} & 0.09 \\ & (0.16) \end{aligned}$ |
| Grandparent Solidarity*Ideology |  | $\begin{aligned} & 0.21^{* *} \\ & (0.08) \\ & \hline \end{aligned}$ |  | $\begin{aligned} & -0.02 \\ & (0.07) \\ & \hline \end{aligned}$ |
| Political Ideology |  |  |  |  |
| Conservative | -0.50 *** | -0.47*** | -0.51 *** | -0.51 *** |
|  | (0.10) | (0.10) | (0.10) | (0.10) |
| Liberal | $0.34 * * *$ | 0.37*** | 0.34*** | 0.34*** |
|  | (0.10) | (0.09) | (0.09) | (0.09) |
| Education |  |  |  |  |
| High School | -0.11 | -0.14 | -0.13 | -0.13 |
|  | (0.26) | (0.26) | (0.26) | (0.26) |
| College | -0.10 | -0.13 | -0.12 | -0.12 |
|  | (0.27) | (0.27) | (0.27) | (0.27) |
| Mother Has College Degree | -0.12 | -0.15 | -0.12 | -0.12 |
|  | (0.10) | (0.10) | (0.10) | (0.10) |
| Father Has College Degree | $-0.22 \dagger$ | -0.20 | $-0.22 \dagger$ | $-0.22 \dagger$ |
|  | (0.13) | (0.13) | (0.13) | (0.13) |
| Family Context |  |  |  |  |
| Currently Married | -0.14 | -0.11 | -0.14 | -0.14 |
|  | (0.09) | (0.09) | (0.09) | (0.09) |
| Any Children | -0.12 | -0.11 | -0.11 | -0.11 |
|  | (0.09) | (0.09) | (0.09) | (0.09) |
| Currently Live With Parents | 0.12 | 0.09 | 0.11 | 0.11 |
|  | (0.11) | (0.10) | (0.11) | (0.11) |
| Parents Ever Divorced | -0.06 | -0.09 | -0.05 | -0.05 |
|  | (0.08) | (0.08) | (0.08) | (0.08) |
| Socio-Demographics |  |  |  |  |
| Female | $0.14 \dagger$ | $0.13 \dagger$ | $0.14 \dagger$ | $0.14 \dagger$ |
|  | (0.07) | (0.07) | (0.07) | (0.07) |
| Age | 0.01 | 0.01 | 0.01 | 0.01 |
|  | (0.01) | (0.01) | (0.01) | (0.01) |
| Non-White Racial-ethnicIdentityEmployed | 0.02 | 0.05 | 0.01 | 0.01 |
|  | (0.12) | (0.12) | (0.12) | (0.12) |
|  | -0.05 | -0.07 | -0.04 | -0.04 |
|  | (0.10) | (0.09) | (0.10) | (0.10) |

Table 3. Continued

| $2{ }^{\text {nd }}$ Quartile Household Income | $\begin{aligned} & 0.13 \\ & (0.10) \end{aligned}$ | $\begin{aligned} & \hline 0.12 \\ & (0.10) \end{aligned}$ | $\begin{aligned} & \hline 0.13 \\ & (0.10) \end{aligned}$ | $\begin{aligned} & \hline 0.13 \\ & (0.10) \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| $3{ }^{\text {rd }}$ Quartile Household Income | -0.10 | -0.09 | -0.11 | -0.12 |
|  | (0.12) | (0.12) | (0.12) | (0.12) |
| $4^{\text {th }}$ Quartile Household Income | $\begin{aligned} & 0.06 \\ & (0.11) \end{aligned}$ | $\begin{aligned} & 0.06 \\ & (0.11) \end{aligned}$ | $\begin{aligned} & 0.05 \\ & (0.11) \end{aligned}$ | $0.04$ $(0.11)$ |
| Sample Characteristics |  |  |  |  |
| Sampled in Wave 7 (2000) | -0.10 | -0.10 | -0.10 | -0.10 |
|  | (0.10) | (0.10) | (0.10) | (0.10) |
| Intercept | 2.10 *** | 3.82*** | $2.05 * * *$ | 1.89** |
|  | (0.45) | (0.76) | (0.44) | (0.65) |
| $\mathrm{R}^{2}$ | 0.3561 | 0.3708 | 0.3577 | 0.3579 |
| N | 338 | 338 | 338 | 338 |

Table 4. OLS Regression of Structural Solidarity on the Effect of Grandparent Working Mother Ideology on Grandchild Ideology

|  | Grandparental Proximity |  | Grandparental CoResidence |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Model 11 | Model 12 | Model 13 | Model 14 |
| Grandparent Ideology | $0.12 \dagger$ | 0.17* | 0.13* | 0.14* |
|  | (0.06) | (0.08) | (0.06) | (0.07) |
| Parent Ideology | $0.17 * * *$ | 0.16 *** | 0.16*** | 0.16*** |
|  | (0.05) | (0.05) | (0.05) | (0.05) |
| Grandparent Structural Solidarity | 0.14* | $0.51 \dagger$ | $0.22 \dagger$ | 0.69 |
|  | (0.07) | (0.30) | (0.12) | (0.55) |
| Grandparent Solidarity*Ideology |  | -0.16 |  | -0.20 |
|  |  | (0.13) |  | (0.23) |
| Political Ideology |  |  |  |  |
| Conservative | -0.46 *** | -0.46 *** | $-0.44^{* * *}$ | $-0.44 * * *$ |
|  | (0.08) | (0.08) | (0.08) | (0.08) |
| Liberal | 0.25*** | 0.25*** | 0.26*** | 0.26*** |
|  | (0.07) | (0.07) | (0.07) | (0.07) |
| Education |  |  |  |  |
| High School | 0.05 | 0.05 | 0.05 | 0.05 |
|  | (0.15) | (0.15) | (0.15) | (0.15) |
| College Degree | 0.06 | 0.08 | 0.10 | 0.10 |
|  | (0.16) | (0.16) | (0.16) | (0.16) |
| Mother Has College Degree | -0.09 | -0.09 | -0.09 | -0.09 |
|  | (0.08) | (0.08) | (0.08) | (0.08) |
| Father Has College Degree | -0.14 | -0.13 | -0.13 | -0.13 |
|  | (0.11) | (0.11) | (0.11) | (0.11) |
| Family Context |  |  |  |  |
| Currently Married | -0.07 | -0.07 | -0.08 | -0.08 |
|  | (0.08) | (0.08) | (0.08) | (0.08) |
| Any Children | -0.14† | -0.14† | -0.14† | -0.14† |
|  | (0.08) | (0.08) | (0.08) | (0.08) |
| Currently Live With Parents | 0.07 | 0.07 | 0.07 | 0.07 |
|  | (0.09) | (0.09) | (0.09) | (0.09) |
| Parents Ever Divorced | -0.06 | -0.05 | -0.06 | -0.06 |
| Parents Ever Divorced | (0.07) | (0.07) | (0.07) | (0.07) |
| Socio-Demographics |  |  |  |  |
| Female | $0.12 \dagger$ | $0.11 \dagger$ | $0.11 \dagger$ | $0.11 \dagger$ |
|  | (0.06) | (0.06) | (0.06) | (0.06) |
| Age | 0.01 | 0.01 | 0.004 | 0.004 |
|  | (0.01) | (0.01) | (0.01) | (0.01) |
| Non-White Racial-ethnicIdentityEmployed | -0.03 | -0.03 | -0.03 | -0.04 |
|  | (0.10) | (0.10) | (0.10) | (0.10) |
|  | 0.002 | 0.01 | -0.01 | -0.01 |
|  | (0.08) | (0.08) | (0.08) | (0.08) |

Table 4. Continued

| $2^{\text {nd }}$ Quartile Household Income | 0.04 | 0.04 | 0.03 | 0.04 |
| :---: | :---: | :---: | :---: | :---: |
|  | (0.08) | (0.08) | (0.08) | (0.08) |
| $3{ }^{\text {rd }}$ Quartile Household Income | -0.06 | -0.07 | -0.06 | -0.07 |
|  | (0.10) | (0.10) | (0.10) | (0.10) |
| $4{ }^{\text {th }}$ Quartile Household Income | -0.01 | -0.01 | 0.01 | 0.01 |
|  | (0.09) | (0.09) | (0.09) | (0.09) |
| Sample Characteristics |  |  |  |  |
| Sampled in Wave 7 (2000) | -0.10 | -0.09 | -0.09 | -0.09 |
|  | (0.08) | (0.08) | (0.08) | (0.08) |
| Intercept | 1.87*** | 1.77*** | 1.93*** | 1.90*** |
|  | (0.31) | (0.32) | (0.31) | (0.31) |
| $\mathrm{R}^{2}$ | 0.3051 | 0.3076 | 0.3038 | 0.3050 |
| N | 461 | 461 | 461 | 461 |


[^0]:    ${ }^{1}$ Fewer than five individuals had grandparents who passed away before they were born, but these triads were not included in the study.

[^1]:    ${ }^{2}$ While grandparent responses are consistent across waves, grandchildren did not always identify the same grandparent across all waves. In terms of percentages, $4 \%$ of the sample had inconsistencies in who they identified as their grandmother and $6 \%$ had inconsistencies in who they reported as their grandfather. Inconsistencies were evaluated on a case by case basis and responses to any item on these scales that was associated with an inconsistent grandparent was set to missing for the purposes of this study.

