

## 6. Does Donald need Uncle Scrooge? Extended family wealth and children's educational attainment in the United States

**Irene Prix and Fabian T. Pfeffer**

---

### BACKGROUND AND RESEARCH QUESTIONS

#### **The Intergenerational Role of Wealth**

The central question in most sociological analyses of social mobility and status attainment concerns the degree of socioeconomic inheritance: to what extent do parents pass on their social class, education, occupational status and income to their children? This type of inheritance is usually considered a measure of inequality in life chances because it signals that children's social position is not entirely a function of their own achievements but instead relies to a significant degree on the socioeconomic position of their families. Of course, this association between children's outcomes and their family background is only in a figurative sense an instance of inheritance. In contemporary capitalist societies, educational degrees, occupations and earnings typically are not directly transferred from parents to their children, but passing on such status and resources across generations involves a multitude of complex, intervening social mechanisms. In contrast, the one social resource that can be inherited and transferred in a more literal sense – wealth – tends to be absent from many studies on stratification.

Wealth includes both financial assets (savings, stocks, bonds, life insurance, and so on) and non-financial property, such as housing and vehicles, and is typically measured at the household level. In terms of social inequality, wealth is undoubtedly highly relevant: inequality in assets is more severe than inequality in income, and furthermore, there is evidence for an upward trend in wealth inequality during recent decades, particularly in the United States (Pfeffer et al. 2013; Wolff 2010). In addition, wealth

inequality in the United States has a profound racial component, with black Americans commanding much less wealth than whites (Oliver and Shapiro 2006).

Although most studies on social stratification rely on measures of income, earnings, or occupational status to capture the economic resources of families or individuals, wealth has increasingly been acknowledged as an independent dimension of stratification in the recent social mobility literature. Although assets have the potential to be converted into income flows, income derived from wealth remains conceptually distinct from earnings because of its independence from labour input (for example, working hours) and labour interruptions (for example, illness or unemployment). In this way, assets may serve as a safety net in times of crisis, preventing acute shocks such as unemployment, illness or death in the family from spiralling into accumulating disadvantage (Spilerman 2000). In other words, wealth is sociologically relevant for both its purchasing and its insurance functions: the life chances of the wealthy are increased by the possibility of converting wealth into income flow; moreover, knowledge of a safety net in the form of assets can affect decisions and behaviours because of that safety net's impact on individuals' risk assessments (Pfeffer 2011; Pfeffer and Hällsten 2012).

Precisely because of the twofold nature in which wealth may affect individuals' well-being, asset inequality might significantly affect other types of social inequality, such as inequality in educational outcomes. Previous research shows an association between parental assets and children's maths achievement and between parental assets and children's likelihood of high school graduation (Friedline et al. 2015; Nam and Huang 2009; Orr 2003; Yeung and Conley 2008). Given that US public schools are funded by local property taxes, the quality of children's schooling may be directly affected by their parents' access to housing in desirable neighbourhoods (Conley 2010). Moreover, parental wealth has also been shown to affect children's post-secondary educational attainment in the United States (Conley 2001; Haveman and Wilson 2007; Morgan and Kim 2006). This is because the substantial direct and indirect costs of attending higher education are more likely to be borne by savings instead of income; furthermore, ownership of assets and property can facilitate access to loans. But in addition to what assets can purchase, the insurance function of wealth can reduce individuals' risk when investing in educational pathways that carry a high cost of failure (Pfeffer 2011; Pfeffer and Hällsten 2012).

### **The Importance of the Extended Family**

Whereas neoclassical explanations of wealth differences tend to emphasize individuals' varying propensity to save instead of fully consuming their income, recent evidence suggests that a sizeable share of household wealth is the result of inheritances and *inter vivos* gifts (Alvaredo et al. 2015). As such, household wealth is intimately tied to the family, but not necessarily only the nuclear family. Although parents constitute the main source of private financial support for adult children, a substantial share of gifts and bequests comes from grandparents, siblings, aunts and uncles (Brown and Weisbenner 2004). Consequently, it has been argued that an exclusive focus on the nuclear family is too confined a perspective to examine the importance of resources for children's outcomes (Jæger 2012; Mare 2011).

The sociological relevance of a multigenerational perspective has recently been acknowledged in stratification and social mobility research more generally (Mare 2011, 2014; Pfeffer 2014). Recent multigenerational studies have found a direct association between grandparents' resources and their grandchildren's social class (Chan and Boliver 2013; Hertel and Groh-Samberg 2014) and educational outcomes (Hällsten 2014; Hällsten and Pfeffer 2017; Møllegaard and Jæger 2015; Pfeffer 2014), net of the influence of parents' resources. Nevertheless, although stratification research is beginning to acknowledge grandparental influences, less is known about the role of other extended family members such as aunts and uncles with regard to children's stratification outcomes. A notable exception in this regard is Jæger's (2012) study, which finds that not only grandparents' but also aunts and uncles' resources play a role in children's educational attainment, particularly for children whose parents possess a low level of educational and socioeconomic resources. Similarly, recent Swedish research suggests that aunts and uncles may exert not only a small direct effect but also compensating effects on children's adult social position (Müller and Grund 2014). In this chapter, we assess the contribution of aunts and uncles' wealth to their nieces and nephews' educational outcomes.

Why should aunts and uncles matter? Studies on kinship networks show that among adult siblings in the US, about one-third report weekly contact with a brother or sister (Murphy 2008, p. 5). Approximately 50 per cent of adults with siblings report at least monthly contact, and approximately 40 per cent exchange advice and support with their sibling, with women being overall more likely than men to support their siblings (White 2001; White and Riedmann 1992). Given that financial hardship and emotional stress can negatively affect the quality of parenting (see Kotchick and Forehand 2002 for a review), any direct support that aunts and uncles lend to their siblings can simultaneously benefit their nephews and nieces. In addition,

aunts and uncles' financial resources can impact upon their nieces and nephews' life chances even in the absence of direct transfers to them or their parents, for instance, if the level of aunts and uncles' wealth inspires children to strive for similar levels of social prestige. Finally, children may perceive aunts and uncles' wealth as an additional safety net to fall back on, which in turn may lead to them to consider higher education as a more realistic and attainable option.

### **The Compensating Role of Wealth in the Extended Family**

In our assessment of the role of wealth in the extended family for children's educational attainment, we draw on two types of compensation processes outlined by Erola and Kilpi-Jakonen (Chapter 1 in this volume). First, we study interpersonal compensation by addressing how aunts and uncles' wealth can alleviate the effect of a lack of parental wealth on children's educational outcomes. Aunts and uncles with high levels of net worth – that is, a larger stock of money than they may require to cover current and future consumption – might be the most willing to transfer money to their siblings with children or even directly to their nephews and nieces. For instance, wealthy aunts and uncles may facilitate less well-off parents' access to homeownership by providing security or private loans. This may help stabilize children's economic conditions and give them access to more favourable neighbourhoods and school environments. Moreover, wealthy aunts and uncles may support their nieces and nephews by directly contributing to the costs of college tuition if their parents are financially unable to do so, making college education a more realistic educational pathway.

Second, aunts and uncles' wealth may also moderate the effect of resources in children's immediate family. This type of compensation could be thought of as a combination of interpersonal and type compensation (Erola and Kilpi-Jakonen, Chapter 1 in this volume). For instance, aunts and uncles with a higher level of financial assets may be in a position to financially help nieces and nephews from low income families by providing them with larger gifts (for example, a computer) that enhance their school progress and attachment. Such support may also indirectly help children if it reduces parental stress and thereby buffers the negative impact of economic strains on children's educational progress (Conger et al. 2010; Votruba-Drzal 2003). In addition, as mentioned above, it could be that aunts and uncles' wealth affects their nieces and nephews through the social prestige that wealth carries. Wealthy aunts and uncles may act as role models for their nieces and nephews and instil higher aspirations for social success (Hertel and Groh-Samberg 2014). This role model function might be particularly important where such role models are missing

in the immediate family; moreover, it might also be reinforced by parents lacking educational and financial resources: faced with the example and the resources of their successful siblings, parents may consider longer educational careers as a more attainable option for their children and prefer upward social mobility to status maintenance for their children.

### **Research Questions**

In sum, research on social mobility and stratification has undergone two recent developments: on the one hand, an increased interest in the role of family wealth in shaping children's outcomes; on the other hand, a broadened perspective on how extended family members contribute to children's life chances. In this chapter, we draw on both of these insights by studying the role of extended family members' wealth in children's educational outcomes. In doing so, we concentrate our attention on members of the extended family that have been featured to a lesser extent in previous multigenerational stratification research: aunts and uncles. Having noted the potential support and compensating potential between extended family members, we ask about the extent to which wealthy aunts and uncles can help compensate for the potential disadvantage of low levels of parental wealth and other parental resources with respect to children's educational outcomes.<sup>1</sup> In particular, we address the following three research questions:

1. Is aunts and uncles' wealth directly associated with children's chances of graduating from high school, attending college and obtaining a college degree?
2. Can aunts and uncles' wealth compensate for a lack of parental wealth with regard to these educational outcomes?
3. To what extent can aunts and uncles' wealth compensate for low levels of other parental resources, such as education and income, with regard to children's educational attainment?

### **DATA**

The Panel Study of Income Dynamics (PSID) provides the necessary data to simultaneously study multigenerational processes and the role of wealth in social stratification in the United States (PSID 2016). Starting in 1968 with both a nationally representative household sample (Survey Research Center (SRC) sample) and an oversample of low-income households (Survey of Economic Opportunity (SEO) sample), the PSID has been following not only each original sample member but also their descendants, in annual and

since 1997 in biannual survey waves. With the most recently available wave dating to 2013, the PSID is the longest-running nationally representative panel study, comprising three and more generations of respondents.

We restrict our analytical sample to children born between 1973 and 1983 from both the SRC and SEO samples of the PSID. These children are then linked to both their parents and their aunts and uncles using PSID's Family Identification Mapping Systems (FIMS). Given the sample following rules of the PSID, information on extended family members is typically restricted to one side of the family. In other words, we usually observe only paternal or maternal aunts and uncles but not both. Accordingly, the aunt and uncle associations estimated here may provide conservative estimates of the overall role of aunt and uncle wealth. We further restrict our sample to cases for which we observe children's educational outcomes and have complete information on the resources of both parents and aunts or uncles. The resulting analytical sample is composed of 1748 individuals.

### **Dependent Variables**

The dependent variables in our models are three dummy variables that represent the following levels of educational attainment: *High school graduation* refers to having at least a high school diploma or having successfully passed the General Educational Development (GED) exam, which – like the high school diploma – confers eligibility for higher education admission. *Some college* refers to individuals who entered college at some point, regardless of the type of degree programme (for example, associate's or bachelor's degree) and regardless of whether they have obtained the degree or dropped out. Finally, *College degree* indicates graduation from college with at least a bachelor's degree. The basis for these outcome variables is respondents' highest recorded educational attainment when they were a minimum of 22 and a maximum of 30 years old.

### **Key Independent Variables**

Of primary importance in our analyses are three resources of respondents' immediate and extended family: education, wealth and income. Educational resources are measured as years of education attained by immediate and extended family members. By wealth, we mean the total value of a family's financial and non-financial assets (including housing equity) minus any debts; that is, family net worth. To obtain a better picture of a family's general economic situation, our wealth and income variables are averaged across several consecutive data points during the respondents' childhoods. Between 1984 and 1999, PSID survey questions

on wealth were asked only every fifth year. To secure a minimum of two measurement points for each birth cohort, the reference periods for our average family wealth measures refer to the time when the children studied here were between 6 and 16 years old. Our income variables, which are measured annually, refer to average total family income while children were between 10 and 16 years old and have been adjusted by household size using the modified Organisation for Economic Co-operation and Development (OECD) equivalence scale (Eurostat 2014). Both income and wealth have been inflation adjusted to 2014 constant dollars. Income is entered into the models as percentiles. Given that previous studies have found non-linear relationships between family wealth and children's educational outcomes (Friedline et al. 2015; Nam and Huang 2009) and our interest in the type of compensatory processes described above, we group all net worth variables into three categories, distinguishing low levels of wealth (first net worth quartile), medium levels of wealth (second and third quartiles) and high levels of wealth (highest quartile).<sup>2</sup>

We rely on the dominance principle when measuring respondents' family resources. Children's educational resources in the immediate family are represented by the parent with the highest level of educational attainment. We apply the same principle to aunts and uncles, choosing the highest measured level of resources among all observed aunts and uncles to represent the level of education, income and wealth in the extended family network. This decision is also driven by our focus on compensatory mechanisms: we hypothesized that compensation will likely be provided by the aunts and uncles who are in the most advantaged social position, and that for this reason other measurement approaches, such as averaging across aunts and uncles, provide a conceptually less suitable approach.<sup>3</sup> Similarly, we believe that compensation is also more likely to be provided in response to the absence of a particular resource in the parental household; for instance, the absence of a college-educated parent instead of, for example, the parents' average educational status.

### **Control Variables**

Our models include several control variables that are known to be associated with educational attainment and may confound the relationship between family wealth and children's educational outcomes. We control for gender given the well-documented fact that women in the birth cohorts studied here have surpassed men in their educational attainment in the United States (DiPrete and Buchmann 2013). Although black Americans' educational attainment lags behind that of whites, much of this gap has been shown to derive from the persistent socioeconomic disadvantage

faced by many black families, in terms of both wealth and family income (Conley 2010; Killewald 2013). As a crude measure of race and ethnicity, we include a dummy for non-whites. In addition, we add an indicator for children's birth cohort (born 1973–78 versus 1979–83) because older and younger cohorts in our sample may be differentially affected by the expansion of US higher education. Our models also include a dummy variable indicating whether the child has ever lived in a single- or step-parent household during their childhood. This is because single-parent families often face greater economic hardship (Sawhill and Thomas 2005) and have been associated with lower educational outcomes for children (Björklund et al. 2007). Because older parents might have had more chances to establish themselves in the labour market prior to the birth of their child, we also add into our models the age of the household head in which the child lives at age 16. To account for the possible dilution of family resources in larger families, we add a continuous control variable for the number of children living in the household of our target child during the year they turn 16.<sup>4</sup> Descriptive statistics for all variables in our models are listed in Table 6.1. These descriptive analyses have been weighted using a standardized version of the longitudinal individual weights supplied by the PSID.

## METHODS

Our analyses are based on multilevel linear probability models for each educational outcome. In contrast to the so called Mare model, each of our models is based on the entire analytical sample instead of sub-samples at risk of making a particular educational transition (see also Angrist and Pischke 2009). The multilevel structure of our models nests individuals in their immediate and extended families. This accounts for the fact that our data contain not only siblings but also first cousins, which is likely to violate ordinary least squares (OLS) assumptions of independent observations. In addition, we use Huber–White standard errors to accommodate the heteroskedastic error variance arising from the linear modelling of our dichotomous dependent variables. Although our multivariate analyses in this chapter are unweighted, we do add a control for individuals' sample type (SRC versus SEO sample). Robustness analyses based on linear probability models (ignoring the multilevel structure) weighted by standardized individual longitudinal weights yielded substantively similar conclusions (not shown). After examining the main associations between family wealth, in particular aunts and uncles' wealth, with each educational outcome, we test possible interactions between aunts and uncles' net worth and various parental resources to detect potential compensation effects.



*Table 6.1 Descriptives of independent and dependent variables in the analytical sample, weighted*

Variable	Mean	SD	%
High school diploma			92.0
Some college			65.7
College degree			26.7
Parents' years of education	13.5	2.2	
Age of household head around child's age 16	41.8	5.9	
Number of children in household around age 16	2.5	1.1	
Average family income (equivalized)	37 128.5	32 450.0	
Average family net worth	173 882.1	463 595.3	
low: first quartile	-800.9	33 767.6	25.5
medium: second and third quartiles	72 621.1	46 192.4	49.8
high: fourth quartile	558 600.9	816 336.0	24.7
Ever lived in single-parent household before age 16			40.3
Non-white			20.4
Female			49.1
Sample type			
SRC sample			85.8
SEO (low-income) sample			14.2
Birth cohort			
Born 1973–78			46.2
Born 1979–83			53.8
Aunts/uncles' years of education	14.1	2.1	
Aunts/uncles' average family income (equivalized)	59 153.7	49 404.4	
Aunts/uncles' net worth	273 612.3	531 596.3	
low: first quartile	6 440.4	104 997.1	26.6
medium: second and third quartiles	138 681.2	72 284.9	49.2
high: fourth quartile	841 794.2	841 907.6	24.2

*Note:* Number of observations, N = 1748.

## RESULTS

### **Is Aunts and Uncles' Wealth Directly Associated with Children's Educational Outcomes?**

We begin with a baseline model that contains only parental resources and other control variables to predict educational outcomes at each level

(Table 6.2, Model 1). Parental wealth is associated with both high school completion and college graduation. On average, children from families with medium levels of wealth (the middle half of the distribution) are 6 percentage points more likely to complete high school and enter college than children from families who grew up in the lowest quartile of the net worth distribution. With respect to graduating from college, however, the impact of wealth unfolds at the top instead of the medium levels of the net worth distribution: children with family wealth in the highest quartile of the distribution are approximately 10 percentage points more likely than those with the lowest levels of family wealth to have graduated with at least a bachelor's degree by age 30. Conditional associations between other family resources and educational attainment in Model 1 are in line with previous studies: children whose parents have higher educational attainment are more likely to complete high school, enter and graduate from college. One additional year of parental education is associated with an increase in the probability of completing high school by an average of approximately 2 percentage points and approximately 6 percentage points with respect to entering and graduating from college. Similarly, parents' income is positively related to educational attainment, net of family wealth and parents' education, with the relationship being somewhat more pronounced for entering and completing higher education than it is for completing high school.

In Model 2, we add aunts and uncles' highest wealth, income and education. We do not observe a significant main effect of levels of aunts and uncles' net worth or income on children's educational outcomes, conditional on parental characteristics. Children with aunts and uncles with higher levels of education, however, are more likely to complete high school and obtain a college degree, net of their parents' education and other resources. In other words, aunts and uncles' education shows a stronger association with children's educational outcomes than do aunts and uncles' economic resources. This finding also replicates the positive association of aunts' education with children's educational attainment reported by Jæger (2012), based on a different US dataset and a different specification of educational outcomes. One may interpret such a finding as evidence for the influence of cultural capital through extended family networks; that is, the role of extended family members in shaping educational expectations or providing role models that increase children's motivation to stay in school and complete a college degree (see also Møllegaard and Jæger 2015). In addition, coefficients for family net worth slightly decrease after aunts and uncles' resources are added to our models, illustrating some level of confounding between the impact of resources in the immediate and extended family with respect to entering college and obtaining a college degree (Model 2).

Table 6.2 Main effects model predicting educational attainment (multilevel linear probability models), unweighted

	High school		Some college		College degree	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Female	0.054*** (0.013)	0.056*** (0.013)	0.142*** (0.021)	0.144*** (0.021)	0.073*** (0.017)	0.076*** (0.017)
Parents' education (years)	0.019*** (0.004)	0.017*** (0.004)	0.056*** (0.006)	0.052*** (0.007)	0.057*** (0.006)	0.050*** (0.007)
Family income (percentiles)	0.001*** (0.000)	0.001*** (0.000)	0.003*** (0.001)	0.003*** (0.001)	0.002*** (0.001)	0.002*** (0.001)
Ever lived with single parent by age 16	-0.016 (0.016)	-0.018 (0.016)	-0.049* (0.025)	-0.051* (0.025)	-0.090*** (0.021)	-0.094*** (0.021)
Non-white (ref. white)	-0.016 (0.030)	-0.016 (0.031)	-0.086* (0.041)	-0.083+ (0.043)	-0.018 (0.032)	-0.014 (0.033)
Number of children in household by age 16	0.000 (0.008)	-0.001 (0.008)	0.001 (0.010)	-0.001 (0.010)	0.007 (0.007)	0.004 (0.007)
Born 1973-78 (ref. born 1979-83)	-0.017 (0.015)	-0.017 (0.014)	-0.070** (0.021)	-0.069** (0.021)	-0.073*** (0.017)	-0.071*** (0.017)

Family net worth (ref. low)						
medium	0.066**	0.067**	0.064*	0.058+	-0.018	-0.020
	(0.022)	(0.022)	(0.033)	(0.033)	(0.024)	(0.024)
high	0.026	0.025	0.085*	0.072+	0.098*	0.086*
	(0.027)	(0.028)	(0.042)	(0.043)	(0.040)	(0.040)
Aunts/uncles' net worth (ref. low)						
medium		-0.029		0.009		-0.031
		(0.022)		(0.030)		(0.022)
high		-0.029		0.019		-0.014
		(0.023)		(0.036)		(0.036)
Aunts/uncles' education (years)		0.009*		0.011		0.018**
		(0.004)		(0.007)		(0.006)
Aunts/uncles' family income (percentiles)		0.000		-0.000		0.000
		(0.000)		(0.001)		(0.000)

Notes:

N = 1748.

All models include controls for age of household head and sample type.

Huber-White standard errors in parentheses.

+ p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001.

### **Can Wealthy Aunts and Uncles Help Compensate for a Lack of Parental Wealth?**

In the analyses reported so far, we did not find direct associations between aunts and uncles' wealth and children's educational outcomes, net of parental resources. However, in motivating the notion of the compensatory effects of aunts and uncles, we also hypothesized important interactions: if parents are well off, aunts and uncles' wealth may add little to either the purchasing or insurance function of wealth that children can access in their immediate family. In contrast, for children of parents with few resources, aunts and uncles' wealth may play a greater role. In other words, aunts and uncles' wealth could act primarily as a compensatory resource that is activated only in times and circumstances of need. To investigate this possibility, we now turn to the set of interaction models displayed in Table 6.3.

Model 1 adds the interaction between parents' and aunts and uncles' wealth to the prediction of children's educational outcomes. We do not find a statistically significant moderating role of aunts and uncles' wealth in the association between parents' net worth and children's high school completion, entry into college, and college graduation. This finding thus does not support the hypothesized compensation function. However, we also note that lack of evidence on the role of aunts and uncles' wealth in compensating for low parental wealth could also arise from empirical challenges. First, our analyses are limited in terms of their statistical power to detect this effect because large disparities in wealth between children's parents and their aunts and uncles are relatively rare;<sup>5</sup> this is itself a reflection of the concentration of wealth within families (Pfeffer et al. 2016; Pfeffer and Killewald 2015). Second, if aunts and uncles compensate for a lack of parental wealth through direct transfers to parents (their siblings) as opposed to children (their nephews and nieces), our measure of parental wealth might already capture the results of such compensation. Whereas a recent PSID module allows tracking transfers within the immediate family to assess their contribution to the similarity in wealth between siblings (see Pfeffer et al. 2016), we unfortunately lack the data to assess transfers from and to extended family.

### **Can Wealthy Aunts and Uncles Help Compensate for a Lack of Other Parental Resources?**

In addition to these measurement challenges, there are conceptual reasons to expand our assessment of the potential compensatory role of aunts and uncles: we have argued that aunts and uncles' wealth might compensate for

Table 6.3 Interaction models of aunts and uncles' family net worth with childhood family resources (multilevel probability models), unweighted

	High school			Some college			College degree		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Parents' education	0.017*** (0.005)	0.022** (0.008)	0.016*** (0.004)	0.052*** (0.007)	0.058*** (0.010)	0.052*** (0.007)	0.050*** (0.007)	0.030** (0.010)	0.051*** (0.007)
Family income (percentiles)	0.001*** (0.000)	0.001*** (0.000)	0.002** (0.001)	0.003*** (0.001)	0.003*** (0.001)	0.004*** (0.001)	0.002*** (0.001)	0.002*** (0.001)	0.001 (0.001)
Family net worth (ref. low)									
Medium	0.039 (0.034)	0.064** (0.023)	0.061** (0.023)	0.062 (0.048)	0.054+ (0.033)	0.050 (0.033)	-0.069+ (0.039)	-0.014 (0.024)	-0.017 (0.025)
High	0.009 (0.042)	0.026 (0.027)	0.026 (0.027)	0.166* (0.076)	0.073+ (0.043)	0.074+ (0.043)	0.048 (0.092)	0.083* (0.040)	0.085* (0.040)
Aunts/uncles' net worth (ref. low)									
Medium	-0.054 (0.038)	-0.030 (0.027)	-0.035* (0.017)	0.020 (0.045)	0.009 (0.032)	-0.003 (0.030)	-0.072** (0.028)	-0.047* (0.021)	-0.010 (0.028)
High	-0.028 (0.061)	0.007 (0.030)	-0.022 (0.022)	0.059 (0.103)	0.053 (0.045)	0.021 (0.037)	-0.034 (0.079)	-0.041 (0.041)	0.006 (0.039)

Table 6.3 (continued)

	High school			Some college			College degree		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Aunts/uncles' net worth * Family net worth									
Medium*Medium	0.048 (0.043)			-0.014 (0.058)			0.075 <sup>+</sup> (0.044)		
Medium*High	0.031 (0.051)			-0.081 (0.082)			0.073 (0.096)		
High*Medium	0.012 (0.065)			-0.016 (0.121)			0.057 (0.086)		
High*High	0.001 (0.068)			-0.159 (0.125)			0.023 (0.128)		
Aunts/uncles' net worth*Parents' education									
Medium*Parents' education					-0.004 (0.012)			0.027* (0.012)	
High*Parents' education					-0.020 (0.014)			0.029* (0.015)	
Aunts/uncles' net worth* Parents' income									
Medium*Parents' income						-0.000 (0.001)			0.002 <sup>+</sup> (0.001)
High*Parents' income						-0.001* (0.001)			0.001 (0.001)

Notes:

N = 1748.

Models include all lower-order and control variables.

Huber-White standard errors in parentheses.

+  $p < 0.1$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

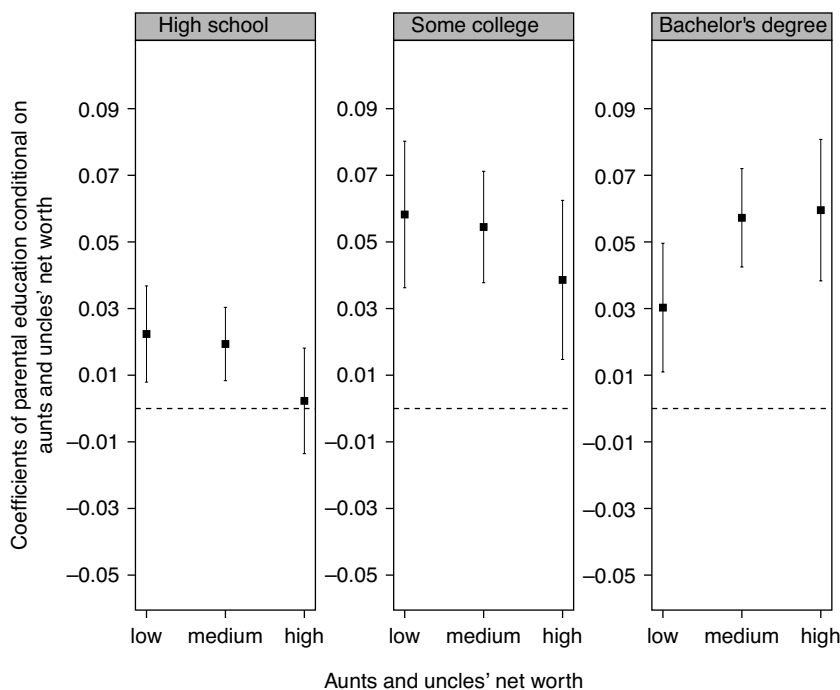
the lack of other parental resources, such as parental income or education. Therefore, we next assess interactions between aunts and uncles' wealth and parental education and income.

Model 2 includes interaction terms between aunts and uncles' wealth and parental education. For high school completion, we find a statistically significant negative interaction effect between parents' education and aunts and uncles' wealth. With regard to college entry, the negative interaction term is similar in size but not statistically significant. These results suggest that aunts and uncles' wealth can compensate for low levels of parental education, provided that aunts and uncles are in the highest quartile of the wealth distribution. This compensatory tendency of aunts and uncles' wealth is further illustrated in Figure 6.1. The association between parents' education and children's high school completion and college entrance decreases among children with aunts and uncles in the highest wealth category. For these children, parental education is no longer associated with their likelihood of completing high school (Figure 6.1, panel 1). With respect to entering college (Figure 6.1, panel 2), each year of parental education is associated with an increase in a child's likelihood of completing high school by approximately 6 percentage points, provided their aunts and uncles possess only low or medium levels of wealth. For children with the wealthiest aunts and uncles, the association between parental education and entering college is substantially reduced, although the difference is not statistically significant in this case (see also Table 6.3, model 2). Overall, these findings are in line with some of the mechanisms hypothesized above: the social prestige enjoyed by wealthy aunts and uncles may confer a role model position upon them to increase the educational aspirations of children from families without highly educated parents. Moreover, wealthy aunts and uncles may reshape the risk assessment of children from less educated backgrounds as they plan their pathway towards educational upward mobility.

In contrast, graduating from college does not appear to be subject to the same types of compensatory mechanisms. As shown in Table 6.3, the interaction effect of extended family wealth with parental education is positive, suggesting that aunts and uncles' wealth augments instead of compensates for the role of parental education in obtaining a college degree. In other words, instead of compensating for disadvantage, extended family wealth multiplies existing advantage (Erola and Kilpi-Jakonen, Chapter 1 in this volume). This result is further illustrated in panel 3 of Figure 6.1, which shows that the size of the association between parental education and children's college graduation chances almost doubles among children with wealthy aunts and uncles.

Finally, we also show that similar patterns arise for the interaction

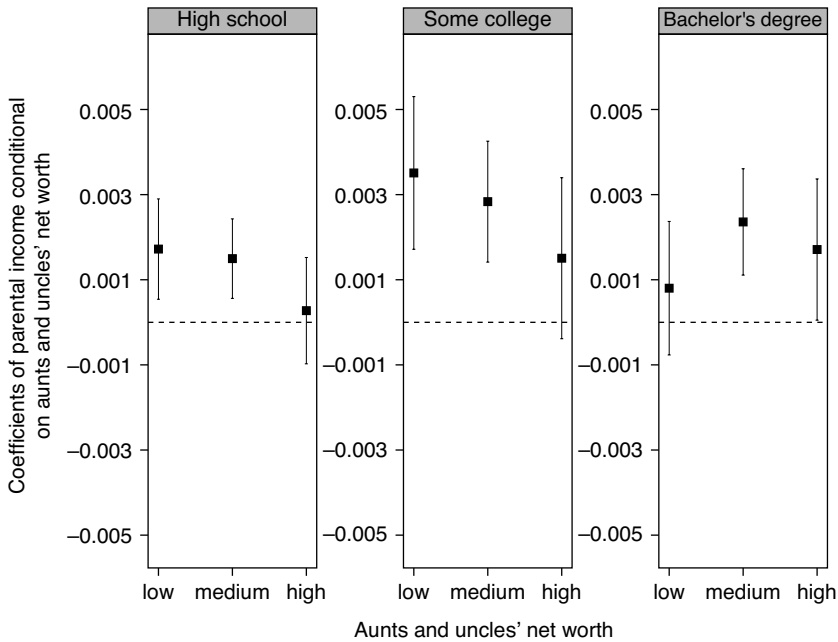




Note: Coefficients based on Model 2 in Table 6.3.

Figure 6.1 Interactions between aunts and uncles' net worth and parental education (coefficient plot)

between parental income and aunts and uncles' wealth. Model 3 in Table 6.3 reports a significant negative interaction for high school completion and a positive interaction for college graduation (in this case, not statistically significant). Figure 6.2 illustrates this relationship graphically: although family income increases educational chances for children with low or only medium levels of aunts and uncles' wealth, parental income appears largely irrelevant for children with very wealthy aunts and uncles. This type of compensatory effect does not apply to college graduation, however, for which our findings instead suggest that children from high income families tend to increase their advantage if their aunts and uncles have medium to high levels of wealth (although the statistical significance of this result is limited). If obtaining a college degree demands high levels of resources that even high income parents are challenged to meet, aunts and uncles' assets primarily help children with a relatively secure start-



Note: Coefficients based on Model 3 in Table 6.3.

Figure 6.2 Interactions between aunts and uncles' net worth and parental income (coefficient plot)

ing position in terms of their family resources. As a result, aunts and uncles can further extend existing advantage instead of compensating for disadvantage.

## CONCLUSION

Any sociological investigation of the transmission of inequality across generations necessarily implies a concern about families. But whose, and what type of, relationships constitute the family that passes on advantages? Family sociologists have noted the shortcomings of a restricted focus on the nuclear family and two generations of biological kin (e.g., Mare 2011). Through the 'matrix of latent kinship linkages' (Riley 1983, p.445) that may be activated in times of need, the extended family could provide a source of compensation (Erola and Kilpi-Jakonen, Chapter 1 in this

volume): for children in less well-off families, the impact of low parental resources on their educational pathways can be buffered if relatives in their extended family can assist by using their economic, social or cultural resources.

In this chapter, we demonstrate that wealth in the extended family may serve as one such buffer. By analysing the role of aunts and uncles' wealth for children's educational outcomes as young adults, this chapter synthesizes two recent strands in social mobility research: the growing emphasis on a multigenerational perspective, and the increasing focus on family wealth for reproducing inequality of opportunity. Our results confirm the importance of wealth in the extended family through a careful assessment of compensatory mechanisms in social reproduction processes: even though aunts and uncles' wealth has no direct impact on children's educational attainment in our models, it significantly moderates the impact of parental resources for children's educational outcomes. More precisely, for children with very wealthy aunts and uncles, their chances of completing high school or entering college are significantly less dependent on their parents' education or income. In other words, wealth in the extended family compensates for disadvantage in a child's immediate family. These findings are in line with previous evidence of a compensatory role of aunts and uncles' education, income and social class for their nieces and nephews' stratification outcomes (Jæger 2012; Müller and Grund 2014).

Although affluent aunts and uncles in our study help to buffer the socio-economic disadvantage experienced by their nieces and nephews in terms of their high school attainment and college entry, it would be unwarranted to interpret extended kinship relations broadly as a great equalizer of educational opportunity. First, we find clear compensation mechanisms only for high school graduation and, with greater statistical uncertainty, for college entry. In contrast, for college attainment, we observed a tendency for aunts and uncles' wealth to reinforce rather than compensate for the impact of parental education. That is, it appears that compensation mechanisms are primarily restricted to less elite levels of education. Second, the compensatory effect that we find primarily benefits children whose aunts and uncles belong to the highest category of wealth in our analyses. A wealthy aunt or uncle can help children in otherwise disadvantaged circumstances, but few children reside in this category.<sup>6</sup> As such, compensation may be part of a counter-mobility process if parental disadvantage constitutes something of an outlier within a more privileged network of extended kinship relations (see Solon 2014). Helping children to overcome the restrictions of their parental background might thus be a means to correct status deviations of the extended family across generations.

This final concern also indicates one limitation of our study. Aunts and uncles' wealth could denote socioeconomic advantage in the longer family lineage because it might reflect the potential influence of the grandparents of children in our study. Whereas Jæger's (2012) finding of very low levels of confounding between grandparents' and aunts and uncles' resources in his multigenerational study of educational attainment strengthens our case for the analysis of aunts and uncles, we plan to expand the analysis to include grandparents in future work. A second limitation, which is mentioned above, is that we can observe only one side of our respondents' aunts and uncles (maternal or paternal) and we are therefore bound to underestimate the availability of (high) wealth in the extended family. Furthermore, if support relationships vary between paternal and maternal relatives (Pashos and McBurney 2008; White 2001), this may further differentiate the effect of their resources on children's life course outcomes (see, e.g., Hällsten and Pfeffer 2017). Indeed, the findings by Lehti and Erola (Chapter 5 in this volume) support this hypothesis for the Finnish case, with maternal aunts and uncles appearing more relevant for resource compensation than aunts and uncles from the paternal side. Finally, this chapter has focused exclusively on children who actually have aunts and uncles. Our analyses are not representative of the family situation of children whose parents have no siblings. Whereas large immediate families are usually considered to dilute parental resources and attention, the effect of differently sized extended families (or even the lack of an extended family) on children's educational and social mobility is less clear. In many respects, the question of how accounting for differences in fertility patterns may alter the conclusions about the importance of extended family networks is an old question of sociological stratification research (Duncan 1966) that has only more recently been the subject of direct empirical tests (Maralani 2013; Mare and Maralani 2006; Song and Mare 2015).

Generally, we consider it likely that the role of extended family in compensating for disadvantage or securing existing advantage varies across countries. First, national institutional settings can amplify or diminish the importance of certain family resources and the ability to pass them on to the next generation and through the extended family. Second, differences between countries in their demographic makeup and trends imply different sizes and shapes of extended family networks. More cross-national comparative research on the question of the role of extended family in stratification processes is therefore needed.

## ACKNOWLEDGEMENTS

This research was supported by the European Research Council (ERC-2013-CoG-617965). Earlier versions of this chapter have been presented at the INDIRECT workshop (1–2 October 2015) at the University of Turku, Finland, and in the research seminar series on Social Stratification, Welfare and Social Policy at the Swedish Institute for Social Research (SOFI), Stockholm University. We thank the participants for their helpful comments. The collection of data used in this study was partly supported by the National Institutes of Health under grant number R01 HD069609 and the National Science Foundation under award number 1157698.

## NOTES

1. Although our focus is on children's educational attainment as young adults, our analyses also speak to Wiborg's (Chapter 7 in this volume) concern about the role of aunts and uncles' wealth for school grades, because associations between extended family inputs and early educational achievement are likely to translate into associations with eventual educational outcomes.
2. The percentiles are drawn based on the weighted distribution of income and wealth in our analytical sample. The resulting quartiles thus express the relative wealth/income position of our sample of children (not the population distribution of any given year).
3. For a closer investigation of whether it is the pool of resources or the highest level of resources among all aunts and uncles that is more relevant, see Lehti and Erola (Chapter 5 in this volume) for the Finnish case.
4. These controls for household composition (number of children in household, ever lived with single parent) should reduce any potential concerns about the need to equalize our wealth measures, as we do for income. For aunt and uncle wealth, where the controls for the structure of the immediate family do not address these concerns, we have engaged in sensitivity checks based on equalized wealth measures that yield substantively similar results.
5. In our data, 2 per cent of children came from families with assets in the lowest quartile but had an aunt or uncle in the top quartile of the net worth distribution.
6. Approximately 7 per cent of children in our sample have parents with at most a high school diploma or equivalent, but an aunt or uncle in the top 25 per cent of the wealth distribution. This share might be higher, although probably not to a substantial degree, if we could observe both sides of the extended family.

## REFERENCES

- Alvaredo, F., B. Garbinti and T. Piketty (2015), 'On the share of inheritance in aggregate wealth Europe and the United States, 1900–2010', paper presented at the Conference on Social Mobility, Chicago, IL, 4–5 November 2014, accessed 1 April 2016 at <http://piketty.pse.ens.fr/files/AlvaredoGarbintiPiketty2015.pdf>.
- Angrist, J.D. and J-S. Pischke (2009), *Mostly Harmless Econometrics: An Empiricist's Companion*, Princeton, NJ: Princeton University Press.

- Björklund, A., D.K. Ginther and M. Sundström (2007), 'Family structure and child outcomes in the USA and Sweden', *Journal of Population Economics*, 20 (1), 183–201.
- Brown, Jeffrey R. and Scott J. Weisbenner (2004), 'Intergenerational transfers and savings behavior', in David A. Wise (ed.), *Perspectives on the Economics of Aging*, Chicago, IL: University of Chicago Press, pp. 181–203.
- Chan, T.W. and V. Boliver (2013), 'The grandparents effect in social mobility: evidence from British birth cohort studies', *American Sociological Review*, 78 (4), 662–78.
- Conger, R.D., K.J. Conger and M.J. Martin (2010), 'Socioeconomic status, family processes, and individual development', *Journal of Marriage and Family*, 72 (3), 685–704.
- Conley, D. (2001), 'Capital for college: parental assets and postsecondary schooling', *Sociology of Education*, 74 (1), 59–72.
- Conley, Dalton (2010), *Being Black, Living in the Red: Race, Wealth, and Social Policy in America*, Berkeley, CA: University of California Press.
- DiPrete, Thomas A. and Claudia Buchmann (2013), *The Rise of Women: The Growing Gender Gap in Education and What it Means for American Schools*, New York: Russell Sage Foundation.
- Duncan, Otis Dudley (1966), 'Methodological issues in the analysis of social mobility', in Neil J. Smelser and Seymour M. Lipset (eds), *Social Structure and Mobility in Economic Development*, Chicago, IL: Aldine, pp. 51–97.
- Eurostat (2014), 'Glossary: Equivalised disposable income', *Eurostat Statistics Explained*, accessed 14 August 2015 at [http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Equivalised\\_disposable\\_income](http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Equivalised_disposable_income).
- Friedline, T., R.D. Masa and G.A.N. Chowa (2015), 'Transforming wealth: using the inverse hyperbolic sine (IHS) and splines to predict youth's math achievement', *Social Science Research*, 49, 264–87.
- Hällsten, M. (2014), 'Inequality across three and four generations in egalitarian Sweden: 1st and 2nd cousin correlations in socio-economic outcomes', *Research in Social Stratification and Mobility*, 35, 19–33.
- Hällsten, M. and F.T. Pfeffer (2017), 'Grand advantage. Family wealth and grandchildren's educational achievement in Sweden', *American Sociological Review*, forthcoming.
- Haveman, Robert and Kathryn Wilson (2007), 'Access, matriculation, and graduation', in Stacy Dickert-Conlin and Ross Rubenstein (eds), *Economic Inequality and Higher Education: Access, Persistence, and Success*, New York: Russell Sage Foundation, pp. 17–43.
- Hertel, F.R. and O. Groh-Samberg (2014), 'Class mobility across three generations in the US and Germany', *Research in Social Stratification and Mobility*, 35, 35–52.
- Jæger, M.M. (2012), 'The extended family and children's educational success', *American Sociological Review*, 77 (6), 903–22.
- Killewald, A. (2013), 'Return to being black, living in the red: a race gap in wealth that goes beyond social origins', *Demography*, 50 (4), 1177–95.
- Kotchick, B.A. and R. Forehand (2002), 'Putting parenting in perspective: a discussion of the contextual factors that shape parenting practices', *Journal of Child and Family Studies*, 11 (3), 255–69.
- Maralani, V. (2013), 'The demography of social mobility: black–white differences in the process of educational reproduction', *American Journal of Sociology*, 118 (6), 1509–58.

- Mare, R.D. (2011), 'A multigenerational view of inequality', *Demography*, 48 (1), 1–23.
- Mare, R.D. (2014), 'Multigenerational aspects of social stratification: issues for further research', *Inequality Across Multiple Generations*, 35, 121–28.
- Mare, R.D. and V. Maralani (2006), 'The intergenerational effects of changes in women's educational attainments', *American Sociological Review*, 71 (4), 542–64.
- Møllegaard, S. and M.M. Jæger (2015), 'The effect of grandparents' economic, cultural, and social capital on grandchildren's educational success', *Research in Social Stratification and Mobility*, 42, 11–19.
- Morgan, Stephen L. and Young-Mi Kim (2006), 'Inequality of conditions and intergenerational mobility: changing patterns of educational attainment in the United States', in Stephen L. Morgan, David B. Grusky and Gary S. Fields (eds), *Mobility and Inequality: Frontiers of Research in Sociology and Economics*, Stanford, CA: Stanford University Press, pp. 165–94.
- Müller, T.S. and T.U. Grund (2014), 'With a little help from my aunts? The role of extended family in intergenerational social mobility patterns', paper presented at the Annual Meeting of the Population Association of America, Boston, MA, 1–3 May, accessed 1 April 2016 at <http://paa2014.princeton.edu/papers/141128>.
- Murphy, M. (2008), 'Variations in kinship networks across geographic and social space', *Population and Development Review*, 34 (1), 19–49.
- Nam, Y. and J. Huang (2009), 'Equal opportunity for all? Parental economic resources and children's educational attainment', *Children and Youth Services Review*, 31 (6), 625–34.
- Oliver, Melvin L. and Thomas M. Shapiro (2006), *Black Wealth, White Wealth: A New Perspective on Racial Inequality*, New York: Taylor & Francis.
- Orr, A.J. (2003), 'Black–white differences in achievement: the importance of wealth', *Sociology of Education*, 76 (4), 281–304.
- Pashos, A. and D.H. McBurney (2008), 'Kin relationships and the caregiving biases of grandparents, aunts, and uncles: a two-generational questionnaire study', *Human Nature*, 19 (3), 311–30.
- Pfeffer, Fabian T. (2011), 'Status attainment and wealth in the United States and Germany', in Timothy M. Smeeding, Robert Erikson and Markus Jäntti (eds), *Persistence, Privilege, and Parenting: The Comparative Study of Intergenerational Mobility*, New York: Russell Sage Foundation, pp. 109–37.
- Pfeffer, F.T. (2014), 'Multigenerational approaches to social mobility: a multifaceted research agenda', *Research in Social Stratification and Mobility*, 35, 1–12.
- Pfeffer, F.T., S. Danziger and R.F. Schoeni (2013), 'Wealth disparities before and after the great recession', *Annals of the American Academy of Political and Social Science*, 650 (1), 98–123.
- Pfeffer, F.T. and M. Hällsten (2012), 'Mobility regimes and parental wealth: the United States, Germany, and Sweden in comparison', PSC Research Report No. 12-766, accessed 1 April 2016 at <http://www.psc.isr.umich.edu/pubs/pdf/rr12-766.pdf>.
- Pfeffer, F.T. and A. Killewald (2015), 'How rigid is the wealth structure and why? Inter- and multigenerational associations in family wealth', Population Studies Center Research Report 15-846, accessed 28 April 2016 at <http://www.psc.isr.umich.edu/pubs/pdf/rr15-845.pdf>.
- Pfeffer, F.T., A. Killewald and A. Siliunas (2016), 'Intergenerational transfers and the concentration of wealth within family lineages', paper presented at the

- Annual Meeting of the Population Association of America, Washington, DC, 31 March–2 April.
- PSID (Panel Study of Income Dynamics) (2016), 'Public use dataset 1968–2013', produced and distributed by the Survey Research Center, Institute for Social Research, University of Michigan, Ann Arbor, MI.
- Riley, M.W. (1983), 'The family in an aging society: a matrix of latent relationships', *Journal of Family Issues*, 4 (3), 439–54.
- Sawhill, I.V. and A. Thomas (2005), 'For love and money? The impact of family structure on family income', *Future of Children*, 15 (2), 57–74.
- Solon, G. (2014), 'Theoretical models of inequality transmission across multiple generations', *Research in Social Stratification and Mobility*, 35, 13–18.
- Song, X. and R.D. Mare (2015), 'Prospective versus retrospective approaches to the study of intergenerational social mobility', *Sociological Methods and Research*, 44 (4), 555–84.
- Spilerman, S. (2000), 'Wealth and stratification processes', *Annual Review of Sociology*, 26, 497–524.
- Votruba-Drzal, E. (2003), 'Income changes and cognitive stimulation in young children's home learning environments', *Journal of Marriage and Family*, 65 (2), 341–55.
- White, L. (2001), 'Sibling relationships over the life course: a panel analysis', *Journal of Marriage and Family*, 63 (2), 555–68.
- White, L. and A. Riedmann (1992), 'Ties among adult siblings', *Social Forces*, 71 (1), 85–102.
- Wolff, E.N. (2010), 'Recent trends in household wealth in the United States: rising debt and the middle-class squeeze – an update to 2007', Levy Economics Institute Working Paper No. 589, accessed 1 April 2016 at [http://www.levyinstitute.org/files/download.php?file=wp\\_589.pdf&pubid=1235](http://www.levyinstitute.org/files/download.php?file=wp_589.pdf&pubid=1235).
- Yeung, J.W. and D. Conley (2008), 'Black–white achievement gap and family wealth', *Child Development*, 79 (2), 303–24.