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The influence of grandparents' social class on children's aspirations

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ABSTRACT

Social class mobility from grandparent to grandchild is a relatively neglected topic. Grandparents today are often healthier and more active, and have longer relationships with their grandchildren than in previous generations. We used data from the UK's Millennium Cohort Study ($n = 8570$) to investigate the influence of maternal and paternal grandparents' social class on the aspirations of children at age seven. Using path analysis and controlling for family income, mother's and father's education, lone motherhood, and child's ethnicity and gender, we found very small direct effects from the paternal grandmother's social class to the grandchild's classed aspirations, and small, indirect effects, via parents' class, of grandparents' class on child's classed aspirations. Multi-group analyses found few differences by ethnicity and gender. There was no evidence that, at this age, mixed-class parentage raises the aspirations of working-class children (the 'sunken middle-class' hypothesis).

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Aspirations; children; grandparents; mobility; social class

Introduction

Traditionally, studies on social class transmission have focused on two generations, the parents' and the child's, and the relationship is well documented. Mobility research has implicitly or explicitly assumed that intergenerational transmission of class status does not extend beyond the parent and child. Recently, however, some studies have examined the influence of grandparent social class on child outcomes. In 2011, Robert Mare's presidential address to the Population Association of America challenged the two-generation paradigm (Mare 2011). Extending the analysis of social mobility to three generations can illuminate the transmission of social positions. A recent article focused on the effect of grandparents' social class on the achieved social class of adult grandchildren (Chan and Boliver 2013). Other research with pre-adult grandchildren has examined the association between the grandparents' characteristics and the abilities of their grandchildren (Ferguson and Ready 2011). The present study explores the direct and indirect influence of maternal and paternal grandparents' social class on the grandchild's classed aspirations.

Social class reproduction

Extensive research has shown that parents pass on their socio-economic advantage or disadvantage to their children (Brooks-Gunn and Duncan 1997). Children's socio-economic backgrounds remain

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strongly associated with their adult income (Hertz 2005), educational attainment (Mare 1981; Strand 2014) and educational aspirations (Strand 2014). Even in early childhood, social class is linked to a range of outcomes, such as health, behaviour and, to a greater extent, education (Sullivan, Ketende, and Joshi 2013; Sullivan, Cara, et al. 2010, Sullivan, Joshi, et al. 2010). Social class is re-enforced through homogamy (Hout 1982; Mare 1991), as people tend to marry within rather than outside their socio-economic group (Kalmijn 1998). There is an even greater preference in marriage for similarity in cultural resources (e.g. values and opinion) than economic status (e.g. income) when choosing partners (Kalmijn 1994). Groups at the top and the bottom of the educational hierarchy are more closed than those in the middle (Kalmijn 1998). This results in social class heterogeneity in the middle ranks, compared with the extremes.

There are competing sociological perspectives on the question of how families maintain their privilege across generations. The rational action perspective (Goldthorpe 2007) maintains that a family's choice of a child's academic pursuits will be driven by the parent's belief that a child will attain a given level of education, the parent's expectations of the cost of that education, and the belief that the level of attainment will protect the child from downward social mobility. As a result, the less advantaged parents aim for the type of qualifications that lead to realistically attainable occupational outcomes for their children rather than risky high-level educational qualifications, which could lead to upward mobility. A contrasting explanation highlights the importance of cultural capital (Bourdieu 1984). According to this view, educated middle-class parents give their children the skills and resources to do well in the educational system. Arguably, both of these frameworks have neglected the way in which families may accumulate resources (both cultural and economic) across several generations. As Halsey (2013) suggests in an autobiographical account, the foundations laid by one generation may be built on by the next.

Social classes are not culturally homogeneous. As discussed, the middle classes, in particular, are quite diverse (Scherger and Savage 2010). This can be explained in part by upward or downward mobility of one or both parents. Advantaged parents whose class positions were stable across generations might have more resources to pass onto their children, compared with parents who achieved upward mobility. Likewise, parents who experienced downward mobility may be better positioned than second-generation working-class parents to help their children retain their own parents' status. In Britain, Jackson and Marsden (1962) describe a large proportion of the working-class families in their study as 'sunken middle class', in which the mothers, in particular, had middle-class fathers. These families had higher amounts of cultural capital and were educationally ambitious for their children. More recently, Crozier et al. (2008) have distinguished between first-generation and second-generation middle-class families in order to investigate differences in the way that families engage with the choice of secondary school.

Grandparent influences are therefore worthy of consideration. Recent demographic changes have increased the potential influence of grandparents on their grandchildren. Grandparents are living longer and having healthier lives, and could therefore – despite rises in the age at childbearing, the demands of eldercare and more long-distance mobility – have longer and more active relationships with their grandchildren. The number of individuals who will live as part of three-generation and four-generation families is increasing (Bengtson 2001). The potential availability of extended kin may become a resource for children as they grow up (King and Elder 1997). In Britain, around one-half of all grandparents of very young children see them at least once a week (Hawkes and Joshi 2007). Grandparents may influence the level of education the grandchild receives, give access to their social networks, and demonstrate the value of certain types of work. More substantially, grandparents are involved in formal or informal types of childcare. In Britain, one in four families receive some form of childcare from at least one grandparent when the child is aged three (Hawkes and Joshi 2007).

Wealth is one of the strongest elements in grandparent–grandchild transfers. Wealth accumulates within the family. Having wealthy grandparents behind wealthy parents may give an additive wealth advantage to the child. Alongside financial or physical capital passed on from generation to generation, financial support can skip a generation and be given directly to the grandchildren.

In the UK Millennium Cohort Study (MCS), almost all families report some financial help from grandparents, from buying essentials to paying for childcare (Hawkes and Joshi 2007). Classic formal studies on income mobility have shown that, owing to regression to the mean, the effect of social advantage or disadvantage disappears in three generations (Becker and Tomes 1986). In the absence of grandparent–grandchild data, these studies modelled the influence over three generations using parent–child estimates. However, recent studies have shown that using only two generations to derive status across generations substantially underestimates long-run persistence for both paternal and, particularly, maternal lineage (Stuhler 2012; Lindahl et al. 2015). In fact, studies using data covering three or more generations maintain that social advantage or disadvantage persists for far longer than three generations (Stuhler 2012). Clark and Cummins (2013) claim that social mobility is slow and there is considerable persistence in the wealth status of households in England from 1800 to 2012. They argue that social class differences can persist for as many as 20–30 generations.

The international evidence on the influence of grandparent class over and above that of parent class is mixed. In a US study, schooling, occupational status and income of grandparents had few significant effects on the occupational status of their grandchildren when parents' characteristics were controlled (Warren and Hauser 1997). A Finnish study showed similar findings, although associations differed by gender lineage (Erola and Moisio 2007). By contrast, a more recent study based on data from three British birth cohort studies found that grandparents' social class had a direct effect on grandchildren's mobility outcomes net of parents' social class, wealth and schooling (Chan and Boliver 2013), although only amongst the higher social classes.

The social inheritance process might be different in grandfathers and grandmothers – paternal and maternal – and for granddaughters and grandsons. Evolutionary theory maintains that maternal grandmothers tend to invest the most in their grandchildren, with more contact and the closest relationships with their grandchildren, followed by maternal grandfathers, paternal grandmothers and, lastly, paternal grandfathers (Coall and Hertwig 2011). However, findings so far are inconclusive because most previous work on grandparent to grandchild effects has been based on one or two selected representatives from the earlier generation. Chan and Boliver (2013) showed maternal grandfather effects, but their study did not include maternal grandmothers and paternal grandparents. Erola and Moisio (2007) found a small, but significant, association between the social status of children and both maternal and paternal grandfathers' status, after controlling for parental status. The status of the grandmothers did not appear to play a role. However, the grandparents' data were based on information collected in 1950 when the labour force participation rate for women was low.

Pfeffer (2014) suggests that multi-generational processes may differ across demographic groups and populations. For example, processes may differ for minority and non-minority groups and by gender. Mobility research has long distinguished the different mobility experiences of men and women, but has not differentiated the gender of parents. Models incorporating both mothers' and fathers' characteristics into class origin measures have been found to fit observed mobility patterns better than conventional joint family class models (Beller 2009). Grandparent–grandchild mobility processes may also differ across countries and time periods. Mare (2014) argues that institutional contexts, such as the national educational system, in more advantaged societies could weaken the roles of grandparents in transmitting advantage to their grandchildren.

Children's aspirations

An aspiration is defined by the *Oxford English Dictionary* as 'a hope or ambition of achieving something'. Aspirations are hopes for the future. They are important because they influence key choices and, in children, are often framed in terms of future occupations. Children's aspirations can be highly ambitious and are often unrealistic, but they become more realistic as children get older (Croll 2008). For most children, their occupational aspirations are higher than their parents' achievements (Kintrea, St. Clair, and Houston 2011). However, it has also long been established that children generally aspire to do the same jobs as their parents at rates significantly above chance (Werts and Watley 1972),

particularly children of primary school age (Trice et al. 1995). A number of studies have reported that both boys' and girls' aspirations tend to be similar to maternal occupations (Trice and Knapp 1992).

Apart from social class, the main determinants of aspirations in children include gender and ethnicity along with the circumstances, occupations, involvement and expectations of parents. In most studies, gender is a major factor in differentiating children's aspirations. Girls tend to consistently have higher educational and occupational aspirations than boys (Mello 2008; Schoon, Martin, and Ross 2007). In the United Kingdom, children and adolescents from ethnic minorities tend to have higher occupational and educational aspirations than white children and adolescents (Croll 2010; Strand 2011). This may be, in part, due to how children perceive the expectations their parents have for them. Ethnic minority parents are more likely to want their children to stay on at school and attend university, pay for private tuition, be involved with their children's schools and have higher levels of supervision (Croll 2010; Strand 2011).

Parents' income, aspirations and involvement have also been found to directly influence children's aspirations. Children from lower-income families aspire to less prestigious occupations (Croll 2008), and also have less belief in their own ability (Goodman and Gregg 2010) than their more advantaged peers. Family resources, both tangible and intangible, also influence child's aspirations indirectly by parents' involvement and aspirations. Parents with less time and fewer resources are less able to encourage their children's aspirations (Williams, Williams, and Ullman 2002), and have lower aspirations for their children (Schoon, Martin, and Ross 2007). Single parents are therefore particularly disadvantaged because they tend to be poorer and have less time and energy to devote to developing their children's human capital (Standing 1999). When time, energy and resources are limited, grandparents may play a role over and above parents in helping children raise their aspirations.

According to Gottfredson (1981), from the age of nine children start to become aware of social class, their ability and values, which leads to the elimination of possible occupational aspirations. However, although younger children may not be making conscious decisions about which jobs are unacceptable because they fall below a minimum status level, they may be more influenced by their parents and their immediate family and environment compared with older children.

The present study

To our knowledge, previous studies on the effects of grandparent social class on grandchildren have focused either on the social class outcome of the adult grandchild or on the grandchild's school performance. Furthermore, few studies have explored the roles of both maternal and paternal grandparents. This study attempted to fill these gaps by investigating the direct and indirect influence of both maternal and paternal grandparents' social class on the classed aspirations of their young (aged seven) grandchildren, as reflected in their choices of aspired future occupation.

The main aim of this study was to investigate the direct association of grandparents' social class with the prestige of their grandchildren's aspirations. Although previous findings are mixed, direct grandparent on grandchild effects have been found in the United Kingdom. In our study, children were at an age when grandparents may be more involved with their grandchildren and it is therefore plausible to expect to find direct grandparent effects on children's aspirations. We hypothesised that maternal grandparents may be more important than paternal grandparents.

The second aim of the study was to chart indirect effects via the child's parents. We expected that any effect of grandparents' class on children's aspirations would be both direct and indirect. In other words, any effect would be mediated, at least in part, by the social class of the parents. Our third aim was to test a specific version of the 'sunken middle-class' hypothesis; that parents who experienced downward mobility, in particular mothers, might have the cultural resources and motivation to influence upward counter mobility in their children's ambitions. Likewise, those parents who achieved upward mobility might not have the resources to influence their children's aspirations to the same social class.

Children's aspirations differ by gender and ethnicity. As discussed, girls and ethnic minority children tend to have higher aspirations than boys and non-white children. We expected the transmission of

social class over generations to vary by ethnicity, because of the high aspirations of immigrant parents, and by gender. Our fourth and final aim, therefore, was to explore differences in the formation of classed aspirations by gender and ethnicity.

Method

Participants

We used data from the MCS, a birth cohort study of over 19,000 children born in the United Kingdom in 2000–2002. MCS was designed to over-represent areas with high proportions of ethnic minorities in England, areas of high child poverty and the three smaller UK countries (Plewis 2007). We used data from the first four sweeps, when the MCS children were aged nine months, three years, five years and seven years, respectively. We used records for only one child per family (singletons and the first-born twin or triplet) to avoid having to account for clustering of children within families. We excluded those families in which the main respondent was not the child's natural mother at Sweep 2 (when the information on grandparent occupation was collected in the MCS). We included occupational (and demographic) information from the child's mother and her partner and for each of the child's grandparents. Aspirations were assessed using the children's written responses at age seven to the open-ended question 'When you grow up, what would you like to be?' Our analytic sample included 8570 participants, comprising all children at age seven giving an occupational aspiration (n = 11,220), subject to the mother's partner being eligible (i.e. present in the household) to be interviewed at Sweep 2 (n = 8701) when the grandparent occupational questions were asked, and where the main respondent was the mother of the child (n = 8570).

Measures

Social class was measured using the three-class version of the National Statistics Socio-economic Classification (NS-SEC). Conceptually, the NS-SEC measures employment relations and conditions of occupations, thus aiming to show the structure of socio-economic positions in society (Rose and Pevalin 2005). The three-class version is assumed to form a hierarchy: category 1, managerial and professional occupations; category 2, intermediate occupations; and category 3, routine and manual occupations. In this study the self-employed were included in category 2, and those who had never worked and the long-term unemployed were included in category 3. Mothers' and partners' highest ever NS-SEC was used. Grandparents' NS-SEC was measured at Sweep 2 when both the mother of the child and her partner were asked what work, if any, their mother and father (the child's grandparents) did when they were aged 14.

Children's classed aspirations were measured with their responses to the aforementioned 'aspiration' question at Sweep 4, when the children were aged seven years. The children's responses were subsequently coded (Flouri, Moulton, and Panourgia 2012). Initially, all occupational aspirations were classified to the four-digit Standard Occupation Classification 2000 (SOC2000). For the purposes of this study, the NS-SEC was derived from the SOC2000 using the guidance issued by the Office for National Statistics. The parent-level controls were family income and the parents' highest academic qualification. As the three-class version of the NS-SEC was used, detailed information on parental family income and academic qualifications were included to account for the confounding effects of these parental characteristics. Family income was measured in equivalised quintiles (Hansen 2014). The highest academic qualification achieved over all sweeps was used for both mother and partner ranging from 1 = 'higher degree' to 7 = 'no qualification'. The child-level controls were gender, any lone mother status in the last seven years, and ethnicity. We used a dichotomous ethnicity variable because sample sizes for the more detailed ethnic classifications were very small. Although the MCS has data on some further details about grandparents (co-residency, geographical distance of residence

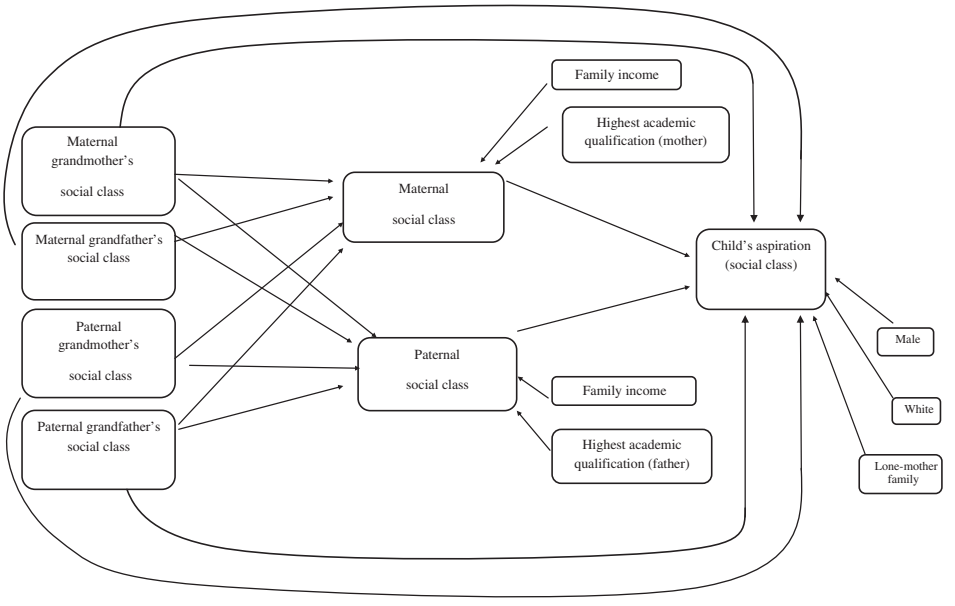

Figure 1. Hypothesised multi-generational pathway model.
Note: within-generation social class correlations are not shown.

and frequency of visits), these details could not be included in our models because the data are not available for each of the four grandparents.

Analytic approach and hypothesised model

We first examined whether children in the analytic sample (n = 8570) differed from children not in it (n = 2650, i.e. those children who gave an occupational aspiration but for whom there was no mother and partner present at Sweep 2), before assessing correlations between all of the study variables. We then fitted path models in Mplus 7.11 (Muthen and Muthen 1998–2012). Our hypothesised model is shown in Figure 1. Initially two models were run, each focusing on two generations: a parent–child model and a grandparent–grandchild model, not allowing for parents' influence on the child. The final model, a pathway model across the three generations, explored the effect on the child's aspirations of paternal and maternal grandparents' social class, while allowing for maternal and paternal social class to be predicted by grandparent social class and in turn predict the child's aspirations. Social class was allowed to co-vary within generations.

Because all of the outcome variables were treated as continuous, we used the maximum likelihood estimation with robust standard errors using a numerical integration algorithm. Maximum likelihood allows missingness to be a function of the observed covariates and the observed outcomes, and is robust to non-normality and non-independence of observations when used with the TYPE = COMPLEX command in Mplus. We used the TYPE = COMPLEX command along with the stratification, cluster and weight options to take account of disproportionate, stratified clustering in the MCS sample selection. In line with current practice, we used several measures to assess the goodness of fit of the model to the data (i.e. the χ^2 statistic, the root mean square error of approximation, the Comparative Fit Index, the Tucker Lewis Index and the standardised root mean square residual).

The indirect (mediated) effects via parents' social class were tested for significance on all of the grandparent–grandchild pathways using the Sobel test (Hayes 2009; Sobel 1982). To explore the 'sunken middle-class' hypothesis we re-ran the final model interacting each of the maternal grandparents'

class with the mother's class, and each of the paternal grandparents' class with the partner's class, on the grandchild's classed aspirations. To test for gender and ethnic differences in the 'effects' of parent and grandparent social class on the child's aspirations, we conducted multi-group analysis using the MODEL TEST command. This examines linear restrictions on the parameters in the model using the Wald chi-square test. Both two-way (boys versus girls; white versus non-white) and four-way (white boys versus non-white boys versus white girls versus non-white girls) comparisons of all of the parent and grandparent pathways to children's aspirations were tested.

Results

Descriptives and correlations

As can be seen in Table 1, the analytic sample comprised more children from white backgrounds and from intact families compared with the non-analytic sample. Parents in the analytic sample had higher family incomes and academic qualifications. Although there was no difference in the prestige of aspirations of children in the analytic sample compared with the non-analytic sample, maternal and paternal social class as well as maternal grandfather's and paternal grandparents' social class were higher in the analytic sample.

Table 2 presents the pairwise correlations between all of the study variables. As expected, boys and children from white backgrounds and lone-parent households had lower aspirations. Although the social class of the child's aspiration was correlated with that of his/her mother, father, maternal grandmother and paternal grandparents, the association was not strong. As predicted, there was a very strong relationship between social class and family income and academic qualifications for both the mother and her partner. The mothers' and their partners' social class were fairly homologous, while there was a smaller correlation between grandmothers' and grandfathers' social class. There was an association between maternal and paternal grandparents' social class and their children's social class (the grandchild's parents), and similar cross-lineage associations.

Table 3 shows that children aged seven had high aspirations. Two-thirds of children had aspirations for managerial and professional occupations. Girls were more likely to aspire to managerial and professional occupations than boys, while more boys than girls reported intermediate occupations ($\chi^2 = 397.97$, $p < 0.001$). White children had lower aspirations than non-white children ($\chi^2 = 46.37$, $p < 0.001$). Around three-quarters of children from non-white backgrounds aspired to managerial and professional occupations and few wanted to be in routine and manual occupations.

Table 4 presents the distribution of mothers' social class, the percentage of parents in the same social class as each other, and the percentage of parents in the same social class as the child's maternal and paternal grandparents. A higher proportion of mothers were in managerial and professional occupations (40.3%) and routine and manual occupations (37.6%) than in intermediate occupations (22.1%). As expected, we found strong evidence for homogamy in social class (i.e. like were married and partnered with like). Over one-half of couples shared the same occupational social class. Homogamy in social class was polarised (i.e. it was stronger at the extremes of the social spectrum than in the middle). Nearly three-quarters of mothers who were in managerial and professional occupations and two-thirds of mothers who were in routine and manual occupations or unemployed had a partner in the same social class. A similar pattern was found in the relationship between parents and grandparents. Between 40 and 47.6% of the child's grandparents had the same social class as the parents. Social reproduction was stronger in the managerial and professional occupations, particularly for the father.

Path models

Two-generational models

We began the analysis by testing for relationships between the parents' social class, the grandparents' social class and the child's aspirations. Model 1 was an intergenerational parent–child social class

Table 1. Descriptive statistics (unweighted data) of study variables in the analytic and non-analytic samples.

		Analytic sample (n = 8570)			Non-analytic sample (n = 2650)		
Variable	Range	n	Mean (SE)	95% CI	n	Mean (SE)	95% CI
Child's aspiration (NS-SEC 1–3)	1–3	8570	1.49 (0.01)	[1.47, 1.51]	2650	1.53 (0.02)	[1.50, 1.56]
Maternal social class (NS-SEC 1–3)	1–3	8049	1.97 (0.01)	[1.95, 1.99]	2497	2.40 (0.02)	[2.37, 2.43]
Paternal social class (NS-SEC 1–3)	1–3	8135	1.94 (0.01)	[1.92, 1.96]	1437	2.31 (0.02)	[2.26, 2.36]
Maternal grandmother's social class (NS-SEC 1–3)	1–3	8203	2.58 (0.01)	[2.56, 2.60]	1931	2.62 (0.02)	[2.59, 2.65]
Maternal grandfather's social class (NS-SEC 1–3)	1–3	7058	2.23(0.01)	[2.21, 2.25]	1791	2.43(0.02)	[2.39, 2.47]
Paternal grandmother's social class (NS-SEC 1–3)	1–3	7146	2.57 (0.01)	[2.55, 2.59]	459	2.47 (0.04)	[2.40, 2.54]
Paternal grandfather's social class (NS-SEC 1–3)	1–3	7067	2.26 (0.01)	[2.24, 2.28]	568	2.38 (0.04)	[2.30, 2.46]
Family income (top [1] to lowest [5] quintile)	5–1	8567	3.80 (0.01)	[3.79, 3.81]	2633	2.73 (0.03)	[2.68, 2.78]
Mother's highest academic qualification (1 = 'higher degree' to 7 = 'none')	1–7	8297	3.81(0.02)	[3.77, 3.85]	2517	4.60 (0.03)	[4.53, 4.67]
Father's highest academic qualification (1 = 'higher degree' to 7 = 'none')	1–7	7228	3.87 (0.02)	[3.83, 3.91]	1129	4.45 (0.06)	[4.34, 4.56]
Male		8570	0.50 (0.01)	[0.49, 0.51]	2650	0.49 (0.01)	[0.47, 0.51]
White		8570	0.86 (0.00)	[0.85, 0.87]	2649	0.79 (0.01)	[0.77, 0.81]
Lone mother family (anytime in last seven years)		8180	0.16 (0.00)	[0.15, 0.17]	2118	0.96 (0.00)	[0.95, 0.97]

Note: CI, confidence interval; SE, standard error.

model, and included the parent-level and child-level covariates. Although very small, there were significant intergenerational 'effects' for the mother ($\beta = 0.05$, $p < 0.001$) and partner ($\beta = 0.07$, $p < 0.001$) and the child after controlling for parental qualifications and income. Model 2 was a direct 'effects' grandparent–grandchild class model not accounting for parent influences. There was a very small degree of class continuity from the maternal grandmother ($\beta = 0.03$, $p < 0.05$), the paternal grandmother ($\beta = 0.04$, $p < 0.01$) and the paternal grandfather ($\beta = 0.04$, $p < 0.05$), but not the maternal grandfather ($\beta = 0.004$, $p = 0.75$), to the grandchild. At age seven, the class of the parents and grandparents explained very little of the variation in children's aspirations.

Three-generational model

Figure 2 shows the results of the fitted three-generational model. The overall model fit was very good ($\chi^2(25) = 240.97$, $p < 0.001$; root mean square error of approximation = 0.032; Comparative Fit Index = 0.968; Tucker Lewis Index = 0.958; standardised root mean square residual = 0.025). Boys and children from white backgrounds had lower aspirations. As expected, for both mothers and their partners higher social class was related to higher family income and higher academic qualifications.

Table 2. Pairwise correlations of key observed study variables.

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Child's aspiration (NS-SEC 1–3)	–												
2. Mother's social class (NS-SEC 1–3)	0.06**	–											
3. Partner's social class (NS-SEC 1–3)	0.09**	0.43**	–										
4. Maternal grandmother's social class (NS-SEC 1–3)	0.04**	0.23**	0.18**	–									
5. Maternal grandfather's social class (NS-SEC 1–3)	0.02	0.26**	0.23**	0.23**	–								
6. Paternal grandmother's social class (NS-SEC 1–3)	0.03*	0.17**	0.20**	0.09**	0.13**	–							
7. Paternal grandfather's social class (NS-SEC 1–3)	0.04**	0.22**	0.27**	0.12**	0.17**	0.25**	–						
8. Family income (top [1] to lowest [5] quintile)	0.05**	0.56**	0.49**	0.21**	0.25**	0.19**	0.24**	–					
9. Mother's highest academic qualification (1 = 'higher degree' to 7 = 'none')	0.05**	0.57**	0.41**	0.25**	0.31**	0.18**	0.25**	−0.53**	–				
10. Partner's highest academic qualification (1 = 'higher degree' to 7 = 'none')	0.07**	0.40**	0.55**	0.19**	0.23**	0.21**	0.29**	−0.48**	0.49**	–			
11. Male	0.05**	0.00	−0.01	0.00	0.00	−0.01	0.01	0.01	0.00	−0.01	–		
12. Non-white	0.08**	−0.16**	−0.10**	−0.11**	−0.06**	−0.07**	−0.02**	0.26**	−0.18**	−0.07**	0.02	–	
13. Lone mother family (anytime in last seven years)	0.04**	0.14**	0.18**	0.05**	0.09**	0.04**	0.07**	−0.25**	0.15**	0.10**	0.01	0.01	–
n	8570	8049	8135	8203	7058	7146	7067	8567	8297	7228	8570	8570	8180
Mean	1.49	1.97	1.94	2.58	2.23	2.57	2.26	3.8	3.81	3.88	0.5	0.86	0.16
Standard deviation	0.74	0.88	0.94	0.71	0.82	0.72	0.84	1.18	1.62	1.76	0.5	0.35	0.36

Note: $^{*}p < .05$; $^{**}p < .01$.

Table 3. Children's classed aspirations by gender and ethnicity (weighted data).

	Total %	Gender		Ethnicity	
Children's aspirations	(n = 8570)	% boy (n = 4245)	% girl (n = 4325)	% white (n = 7368)	% non-white (n = 1202)
Managerial and professional occupations	66.3	60.3	72.2	65.2	74.1
Intermediate occupations	18.5	26.8	10.2	18.7	17.3
Routine and manual occupations	15.2	12.8	17.6	16.1	8.5

Direct, indirect and moderated effects of grandparents' class

In the three-generational model only the paternal grandmother's class was directly related, although very weakly, to the grandchild's classed aspirations. All other grandparent direct effects were no longer significant when parental influence was included in the model. Both the mother's and her partner's class were related, although weakly, to the child's classed aspirations. Significance tests were used to assess whether grandparent effects were mediated via both or either of the parents for all grandparent–grandchild dyads. The maternal grandmother's (mother $\beta = 0.002$, $p < 0.01$; partner $\beta = 0.002$, $p < 0.05$), the maternal grandfather's (mother $\beta = 0.002$, $p < 0.05$; partner $\beta = 0.003$, $p < 0.01$) and the paternal grandfather's (mother $\beta = 0.002$, $p < 0.05$; partner $\beta = 0.005$, $p < 0.01$) class had a significant indirect effect on the grandchild's classed aspirations via the mother's and partner's class. Although the paternal grandmother's class had a direct influence on the child's classed aspirations, we tested for any indirect effects via the parents. There was a very small indirect effect via father's, but not mother's, class (partner $\beta = 0.002$, $p < 0.05$; mother $\beta = 0.001$, $p = 0.28$).

In testing the 'sunken middle-class' hypothesis, there were no significant interactions between grandparents' class and parents' class in predicting children's classed aspirations. Therefore, there was no upward or downward counter-mobility in children's ambitions.

Table 4. Percentage of parents with the same social class as the child's maternal and paternal grandparents (weighted data).

Percentage same NS-SEC (%)	Mother	Partner
Mother same NS-SEC (overall)	–	57.0
1 Managerial and professional	40.3	72.2
2 Intermediate	22.1	14.8
3 Routine and manual occupations (and unemployed)	37.6	66.1
Maternal grandmother same NS-SEC (overall)	43.2	42.1
1 Managerial and professional	61.5	66.4
2 Intermediate	28.0	11.0
3 Routine and manual occupations (and unemployed)	43.3	44.9
Maternal grandfather same NS-SEC (overall)	44.7	44.5
1 Managerial and professional	60.0	71.3
2 Intermediate	25.1	11.5
3 Routine and manual occupations (and unemployed)	47.1	48.4
Paternal grandmother same NS-SEC (overall)	40.0	40.8
1 Managerial and professional	53.9	67.7
2 Intermediate	27.4	8.7
3 Routine and manual occupations (and unemployed)	40.3	43.5
Paternal grandfather same NS-SEC (overall)	42.9	47.6
1 Managerial and professional	57.3	72.7
2 Intermediate	24.3	13.8
3 Routine and manual occupations (and unemployed)	43.9	49.6

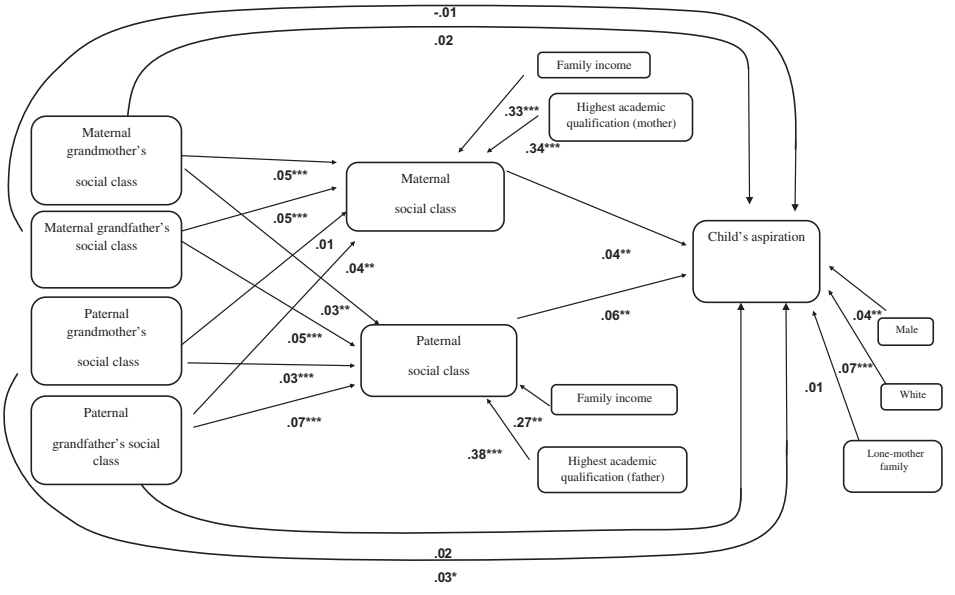

Figure 2. Fitted multi-generational pathway model (standardised regression coefficients).
Note: within-generation social class correlations are not shown.

Gender and ethnic differences in social mobility

There were no differences in the influence of grandparents' or parents' class on children's aspirations by gender or ethnicity. However, in the four-way comparison of gender × ethnicity, non-white boys ($\beta = 0.21$, $p < 0.01$) were more likely than white girls ($\beta = 0.04$, $p = 0.10$; $\chi^2(1) = 4.27$, $p = 0.04$) to be influenced by father's social class.

Discussion

Grandparents can offer financial support and childcare, and can influence their grandchildren's education and social environment. This study is the first using a large cohort to investigate the influence of grandparents' social class on grandchildren's classed aspirations. This study also explored in detail the effect of lineage by considering the social class of all four grandparents for each child. Using data from the MCS, we classified seven-year-old children's occupational aspirations by social class, using the NS-SEC. We examined the direct pathways from grandparents to grandchild and the indirect pathways via parents, while controlling for family income, mother's and partner's education, lone motherhood, and child's ethnicity and gender.

As expected, although small, there was intergenerational social class transmission from the parents' class to the child's classed occupational aspirations. This inter-generational effect is well documented. Parents pass on a share of their class advantage or disadvantage to their children, when they are growing up and as adults. This study also showed that social homogamy is the norm in Britain. The parents' and the grandparents' social class was related within lineage, as well as cross-lineage, both between (grandparent–parent) and within (grandparent–grandparent) generations. As hypothesised, parents' social class mediated the effect of grandparents' class on the grandchild's classed aspirations.

As in previous studies in the United Kingdom and Finland, we found that grandparents' class had a direct (albeit small) effect on children's classed aspirations, net of parents' social class, income and education. However, only the paternal grandmother's social class directly (albeit very weakly) influenced the grandchild's classed aspirations after parental factors were included. This was unexpected,

as maternal grandparents are thought to be more influential. Chan and Boliver (2013) found direct effects from maternal grandfathers, but maternal grandmothers and paternal grandparents were not included in that study. One explanation might be that our sample probably overestimated the influence of paternal grandparents. In order to include the paternal lineage and reduce measurement error we only included generations for which the mother's partner was present at Sweep 2 (at child's age three years). This increased reliability by only including partners who could give details of their parents' occupations. However, this may have overestimated the role that paternal grandparents may play in influencing the grandchild because lone-parent families (when the child was aged three) were excluded. Another explanation may be that previous studies explored intergenerational mobility in earlier time periods when social mobility patterns were different (Bukodi et al. 2015), and modelled adult grandchild outcomes.

In this study, we found no evidence to support the 'sunken middle-class' hypothesis. This could be for a number of reasons. Our study modelled young children's aspirations and not adult social class. Although parents' social class has been found to influence children's aspirations, at this age children have unrealistic aspirations and little awareness of social class. Jackson and Marsden (1962) put forward this hypothesis based on the findings of their qualitative study which explored the achieved social class of grammar school-educated working-class children who passed their 'A' levels from 1946 to 1954. Changes in British culture since the time of those studies may explain the different findings. Jackson and Marsden (1962) explored mobility at a time when absolute social mobility was greater than it is now. Perhaps the most relevant difference is that in our study mothers' social class attribution is typically based on their own occupation, whereas the women in Jackson and Marsden's study went from being ascribed a class based on their father's occupation to being ascribed their husband's class. Finally, only three social class groupings were used here, which may be too broad a measure to capture the heterogeneity of the middle class.

As expected, children's classed aspirations were lower for boys and children from white backgrounds. However, our multi-group analysis found few differences in the direct pathways from the parents' and grandparents' social class to the grandchild's classed aspirations by gender or ethnicity. Gender and ethnicity are major determinants of young people's aspirations. In our study, the higher aspirations of girls and non-white children, compared with boys and white children, at age seven was not explained by the social class of their parents or grandparents. There was one significant difference in the father–child intergenerational class pathway. The aspirations of non-white boys compared with those of white girls were more influenced by the class of the father. This may be reflective of the higher expectations of ethnic minority fathers, particularly for sons. However, our study made the crude contrast between white and all non-white ethnicities, which did not take account of minority ethnic differences. More research is needed to assess the complexity within minority groups.

As discussed, previous studies of grandparent 'effects' have produced mixed findings, partly because of differences in the measurement of social class. For example, Chan and Boliver (2013) used a categorical measurement of social class, while Warren and Hauser (1997) found no effects across three generations, using a continuous classification. A few studies using categorical measurements have shown that grandparent–grandchild associations may be non-linear, polarised by poverty and extreme wealth (Mare 2011). Our study used a continuous three-class measure, and was therefore unable to test for grandparent–grandchild transmission in the extremes of the class system. We could not use a more fine-grained measure of social class because the aspirations of children at age seven were very high, with two-thirds (66.3%) aspiring to managerial and professional occupations. Applying an eight-class or five-class version of the NS-SEC measure would have been inappropriate, as the children were not asked specific questions to establish employment status, supervisory status and size of organisation worked for, to enable responses to be coded to more detailed classes. Although the high proportion of aspirations for managerial and professional occupations puts constraints on the variance of results, prestigious aspirations in children of this age are typical. Children of this age are unlikely to be aware of their social class and the possible advantages and disadvantages of their

class background. As children reach adolescence and their aspirations become more realistic, direct grandparent–grandchild influences may become stronger.

Previous research has shown that the strength of grandparent 'effects' can vary by contextual factors. For example, geographic distance and frequency of contact between grandparents and grandchildren can affect the level of involvement and therefore the influence grandparents have on their grandchildren (Uhlenberg and Hammill 1998). Also, grandparents tend to play an increasing role in times of parental divorce and in single-parent families (Lussier et al. 2002). Although the MCS has data on co-residency, how close in distance a grandparent resides and frequency of visits, the data are not available for each of the four grandparents. As already discussed, the sample used in this study also excluded many lone-parent families, where grandparent resources might be more frequently utilised, thus dampening direct grandparent effects.

Our study found one direct grandparent class effect after parents' classes were accounted for: the paternal grandmother's social class directly (albeit very weakly) predicted the grandchild's classed aspirations. Even at a young age before they are necessarily aware of the concept of social class, children may be influenced by the class of their parents and, to a lesser extent, their grandparents. As children grow up and become aware of their social disadvantage or advantage, two-generational and three-generational social class effects on their occupational aspirations may become more important. Recent demographic changes in mortality rates and health prospects are likely to result in longer and more active grandparent–grandchild relationships, potentially leading to more important 'grandparent effects' in people's lives.

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