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Too much of a good thing? Gender, 'Concerted cultivation' and unequal achievement in primary education

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Abstract: It is well established that cultural and economic resources imparted to children vary significantly by social class. Literature on concerted cultivation has highlighted the extent to which out-of-school activities can reproduce social inequalities in the classroom. Within this literature however, little attention has been given to the role of gender in concerted cultivation. In this paper, we use data from the first wave of the *Growing Up in Ireland* longitudinal study to consider how both social class *and* gender influence the level and type of out-of-school activities in which children engage. Moreover, we examine how out-of-school activities, class and gender impact on children's school engagement and academic achievement. We find that while childrearing logics tend to operate within social class categories, there is an additional cultural aspect of gender in the uptake of different types of out-of-school activities. Our findings suggest the need to move beyond explanations of concerted cultivation to explain gender differences in maths and reading attainment.

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Too much of a good thing? Gender, 'Concerted cultivation' and unequal achievement in primary education

Introduction

A key concern in the sociology of education is the intergenerational transmission of social class status from parents to their children. There is now a well established literature in Ireland and internationally which highlights the relationship between family social class of origin and opportunities and choices that result from differential resources and experiences (see, for example McCoy et al. 2010; Banks et al. 2010; Byrne and Smyth 2010). Cultural analysts of class have now delivered a rich understanding of how cultural resources imparted to children vary by social class in ways that establish inequality at early ages (Bourdieu 1973; Bernstein 1975; Bowles and Gintis 1976; Lareau 2000, 2003). In her work, Lareau (2003) identifies the processes through which inequality is reproduced by exploring how parenting and childhood vary by social class. In this work Lareau (2003) conceptualises social class differences in how parents interact with, and determine the time use of, their children. In doing so, she demonstrates striking social class differences in the organisation of children's daily lives, their language development, and their ability to interact with social institutions, with subsequent implications for academic achievement. Within this work, however, there is limited discussion of the role of gender in shaping childhood and framing futures. This paper seeks to address this gap and considers how class *and* gender influence participation in and the type of out-of-school activities in which children engage. Using a large, nationally representative sample of nine-year-olds in Ireland, we ask whether 'concerted cultivation' is more typical of middle class groups in the Irish context. Furthermore, are females more likely to be engaged in concerted cultivation practices than males? Finally, do concerted

cultivation practices explain school engagement and higher academic achievement for girls and boys?

Concerted Cultivation

Children's educational attainment is strongly associated with the characteristics of their family environment, as the commanding influences of family resources (economic, cultural and social) on children's educational attainment are evident in the strong associations between children's attainment at school and family income, parental occupational status and parental education (Shonkoff and Philips 2000; Smyth et al. 2010). This body of research demonstrates that the resources available to families tend to be limited among some social groups and in turn, children's educational attainment tends to be poorer among these families. Lareau (2003) argues that the different 'logics' of parenting emerge from, and foster, the re-creation of social stratification through the 'transmission of differential advantages' to children raised within them. In doing so, this work clearly outlines the way in which social class differences emerge through the promotion or 'cultivation' of talents in a concerted fashion among middle class families.

According to the concerted cultivation argument, middle class parents adopt strategies such as parent-child discussion, organised activities and evoke their children's feelings, perceptions, opinions and thoughts. These generally structured, 'enrichment activities' (including after school activities in ballet, drama, tennis, music, swimming and art) are established and controlled by middle-class mothers and fathers and dominate the lives of middle class children (Vincent and Ball 2007). By ensuring that their children have these and other experiences, middle-class parents engage in a process of 'concerted cultivation'. Alternatively, working class and low

income parents adopt a strategy of the ‘accomplishment of natural growth’. Here parents are less involved with the structure of their child’s after-school activities and have less focus on how to promote values and skills upon their children that will give them an advantage in school. In many ways this approach to parenting is more spontaneous, focusing on providing for children’s basic needs while allowing talents to develop naturally. The activities that children from working class families engage in are often less organised and unstructured and children have more free time to play with other children in their local area. These children’s lives take place near home with more interaction with siblings and peers, and clearer boundaries between adults and children (Lareau 2003).

The contrasting experiences of middle and upper class children with those of working class and low income children in some ways demonstrate how middle-class children learn to demand what they want while working-class and low income children adopt a more passive stance and learn to accept what is. Furthermore, these class based distinctions translate into a sense of entitlement among middle class children and a sense of restraint among children growing up in poorer households. As a result of this concerted cultivation, Lareau (2003) argues that a sense of entitlement is preserved in children which plays an important role in institutional settings (schools) where middle class children learn to question adults and address them as relative equals. Because the values and behaviours children learn from a ‘cultivated childhood’ (discussions with parents, participation in organised activities) are more highly valued in the dominant culture and institutions in society, these children are advantaged in educational and occupational settings. In contrast, the conditions working class and low income children face, and the lessons learned from them, such as an appreciation of unstructured free time and independence from adult-directed

activity are less valued in dominant institutions. These children, therefore, develop a sense of constraint, and are disadvantaged in the social system.

While children raised within the 'concerted cultivation' logic are better prepared to achieve within social institutions like school and work, Lareau also outlines downsides to this approach. Middle-class children are generally more stressed and exhausted, less creative, and fight more with siblings than working class or poor children. Others suggest that this type of 'hyper-parenting' (Rosenfeld and Wise 2000), or 'intensive mothering and fathering' (Hays 1996) raise questions about the mental health implications for children subjected to the intense talent development (Tofler, Knapp and Drell 1999; Rosenfeld and Wise 2000). Other studies raise concerns about the transformation of children's time outside of the classroom (Elkind 1981, see also 2006; Postman 1982) particularly as children are infrequently allowed to play freely in their local area with friends. Academically, this could mean that the 'hurried child' who spends most afternoons and evenings engaged in activities may have less time for homework and suffer stress or exhaustion. Furthermore, if children spend most of their free time engaged in adult organised activities, they may find themselves less able to interact with peers or develop friendships without adult intervention. Ultimately, Lareau suggests that parents and society should expose all children to the beneficial features of both approaches and be wary of the harmful aspects.

While the vast body of work on children's out of school activities suggests that participation in structured activities, versus free play, is positively associated with children's academic achievement (Marsh and Kleitman 2003; Fletcher et al. 2003; Broh 2002; McNeal 1995; Marsh 1992; Phillips and Schafer 1971) concerted cultivation has been criticised on a number of accounts. Lareau (2003) argues that

differences between working class and middle class children's participation in out-of-school activities go beyond access to financial resources, and contends that the lack of activities may also signal a different approach to childrearing that resists the constant demands of developing their children's talents. Instead parents view their role in terms of caring, protecting and loving their children rather than teaching and 'cultivating' them (Gillies 2007). Her work has been criticised for not exploring how and why structural class position leads to each pattern or logic of childrearing (Tiedemann 2005). Tiedemann (2005) argues that the link between parents' own daily experiences of social environments that encourage and promote individual talent is not fully spelled out, thus running the risk of interpretations that parenting logics are natural rather than adaptive and responsive to circumstances. Others have criticised Lareau for not exploring the positive developmental effects of the accomplishment of natural growth.

Gender and Concerted Cultivation

To date, much less attention has been placed on how the gender of the child influences some aspects of parenting, particularly in the context of concerted cultivation.

Irish research to date has highlighted the key role of mothers in the education and career choice of their children (O'Hara 1998; McCoy et al. 2006; O'Brien 2007, 2008) with relatively less emphasis on how child rearing goals and parenting styles vary according to gender[4]. Recent research in the Irish context suggests the lack of

[4] The sociological and economic literature have found significant effects of child gender on parental time allocation pointing at different patterns in the parenting of sons and daughters. Evidence from time allocation studies indicates that the fathers of sons are more involved than the fathers of daughters with their children's discipline, schoolwork and activities (see Byrne and Smyth, forthcoming).

any significant relationships for child gender in relation to either child or parent behaviour[5] (Cheevers et al. 2010; Halpenny et al. 2010). However, in other contexts, parent's use of concerted cultivation has been found to be more pronounced among daughters than sons (Cheadle and Amato 2010 in United States). The gendered nature of concerted cultivation has been explained in terms of daughters being more compliant with parental directives and influence than are sons (Power et al. 1994). For this reason, parents may engage in more concerted cultivation with daughters because they are more receptive to parental influence than are sons. Alternative explanations rest on the assumption that parents may feel that more efforts are required to cultivate daughters than sons, because women have traditionally attained lower levels of education and occupational status than males, although this difference has narrowed in recent years (Cheadle and Amato 2010) and in fact been reversed in many national contexts (PISA Results, 2010; OECD 2010).

The literature on the extra-curricular activities of children and young people also offer insights into gendered concerted cultivation, which suggests that girls tend to engage in structured activities in childhood more than boys (Fletcher et al. 2003) and boys tend to have more freedom in their choice of activities and freedom from supervision (Posner and Vandell 1999). High levels of part-time job holding among Irish males at earlier stages of second-level education have also been explained in these terms (see Byrne 2007). Further, McCoy and Smyth (2007) find that such part-time employment engagement becomes a zero-sum trade-off with school activities for young people. They further conclude that the negative impact of such part-time employment is, in large part, due to the fact that these students spend more time on

[5] The authors of the report argue that the lack of a significant relationship may be due to the relatively small sample size used or due to the focus of the study which is on a low SES community.

unstructured social activities, which are themselves associated with lower grades (p.240).

Educational Attainment

Gender and educational achievement is a controversial subject in itself (Francis 2009) and as in other institutional contexts there is somewhat of a 'gender crisis' in relation to attainment in Ireland (see O'Connor 2007). The gender debate centres largely on the underachievement of boys and has provoked considerable media and policy attention and is increasingly identified as an international issue (see, for example Francis 1999; Francis and Skelton 2005; OECD 2007). Indeed, the most recently published data from PISA suggests a widening of the gender gap in relation to reading literacy in the Irish context (Perkins et al., 2010). However, the gender focus has also been contested (see for example, Epstein et al. 1998b; Gorard et al. 1999; Connolly 2006) as analysts have questioned the validity of the focus on gender in educational attainment, arguing that factors such as 'race' and social class have a stronger impact on educational attainment than does gender (Archer and Francis 2007). There is, however an ongoing recognition among the research community that gender differences in educational attainment in various forms emerge early in life (see, for example, Mensah and Kiernan 2010; Smyth et al. 2010) and persist through the education system. Studies have shown that gender tends to exert an effect on boys' and girls' level of achievement independent of either social class or parental education (see, for example, Smyth et al. 2010). However, little attention has been placed in the Irish context on the extent to which differences between boys and girls in relation to educational attainment systematically vary across social class groups, particularly at primary level. Is there something about the particular combination of gender and

social class or gender and family income that tends to reduce or exacerbate further gender differences in educational attainment? We seek to address these questions.

Explanations for gender differences in attainment have ranged from those which assume differences are inherent or biologically determined, to those which assume the differences are socially conditioned or a combination of both biological and social influences (the school culture, teaching practices and the home and wider societal environment). It has been put forward that the key influence on educational attainment, family resources (as reflected in the social class and income of the family), has different implications for boys' and girls' educational achievement (Connolly 2006; Fischbein 1990; Scarr and Weinberg 1994; Fischbein et al. 1997). This viewpoint argues that gender plays a small role in determining the educational attainment of children whose early education is well supported and structured by parents of higher socio-economic status (SES). However, gender plays a stronger role in shaping the attainment of children of lower SES who are not supported in the same way. As yet this hypothesis has not been strongly supported by empirical research for Ireland.

Research Questions and Methodology

Within this broader concerted cultivation framework, we ask two central research questions:

1. What role do structured and unstructured out-of-school activities play in the school engagement of boys and girls?
2. Does examining the nature of children's out-of-school lives help in understanding gender and social class differences in children's academic achievement?

The paper is based on data from the first wave of the *Growing Up in Ireland* study – the National Longitudinal Study of Children in Ireland, a nationally representative study of children living in Ireland. Between September 2007 and May 2008, *Growing Up in Ireland* interviewed 8,578 nine year-old children (representing one-in-seven 9 year old children), their parents and their teachers about a wide range of topics and experiences. The underlying framework of the *Growing Up in Ireland* study emphasises children's connectedness to the world in which they live. It draws on Bronfenbrenner's perspective (Bronfenbrenner 1979; Bronfenbrenner et al. 2006) which emphasises the importance of considering the multifaceted and multilayered nature of the influences on development over the life course. Crucially the study places central focus on the child's perspective, eliciting their views and experiences on a range of topics including their likes and dislikes, their participation in out-of-school activities, their attitudes towards school and their aspirations. This information is complemented with information collected from each child's primary caregiver, secondary caregiver, their teacher and other key people in the child's life. Standardised academic tests were also administered to the children. The sample design was based on a two-stage selection process in which the school was the primary sampling unit with the children within school being the secondary units. Using a sample design based on the primary school system had a number of advantages: it provided a virtually comprehensive frame of 9-year-old children in Ireland; it allowed for direct access to the children's principal (school head) and teachers (who were key study informants); and it facilitated the self-completion of academic assessment tests in a group setting. Further details on the study are available in Smyth et al. 2010.

Variable Description

In line with the sociology of childhood, children are regarded as active agents in their own educational development (see, for example Corsaro 1997) and so we focus on measures of children's attitudes regarding their schooling as well as their academic attainment. Specifically, the paper focuses on children's engagement in school at 9 years of age as measured by their response to the question: 'What do you think about school?', to which the child could respond 'always like it', 'sometimes like it' or 'never like it'. The main focus is on the characteristics of children reporting that they 'never like school', the extent to which boys and girls report such negative feelings towards their school and the association between such views and participation in structured and unstructured out-of-school activities.

The paper then focuses on children's school performance on two standardised tests: a reading test score and mathematics test score. These were measured using standardised reading and mathematics tests (ERC 2007a, b). These tests are developed for Irish school children, are linked to the national curriculum and are grade-specific.

In relation to family context, two measures of social background factors were included in the analyses: social class and household income, with the assumption that participation in different types of organised out-of-school activities is likely to be structured by cultural processes and economic resources. The measure of social class used is based on that from the Irish Census of Population, with the occupations included in each group selected in such a way as to bring together people with similar levels of occupational skill. Primary and secondary caregivers are classified into one of the following social class groups based on their occupation: professional workers; managerial and technical workers; non-manual workers; skilled manual workers;

semi-skilled manual workers; unskilled manual workers; no information. Household social class was assigned using a dominance criterion, whereby the classification is taken as the higher of the primary and secondary caregiver's class (where the latter is resident). The measure of household income is based on the combined income of the primary and secondary caregivers, with households grouped into income quintiles.

To tap into the educational and cultural resources within the home, we draw on information on access to books in the home, which has been previously found to be a strong predictor of educational performance (Marks et al. 2006). The primary caregiver was asked to report the number of children's books in the home; here we distinguish between fewer than 10 (including none), 10–30 and more than 30.

We also assess the potential impact of health and social barriers in school engagement and out-of-school activities by including indicators of the presence of an ongoing chronic health problem (according to the child's mother) and the presence of a special educational need. The identification of children with special educational needs is based on the teachers' responses to the following question: 'Do any of the following limit the kind or amount of activity the Study Child can do at school?'

- Physical disability or visual or hearing impairment
- Speech impairment
- Learning disability
- Emotional or behavioural problem (e.g. Attention Deficit (Hyperactivity) Disorder – ADD, ADHD)

We argue that children with such needs may face physical and/or social barriers to participation in out-of-school activities and school engagement. Recent research by McCoy and Banks (forthcoming) shows that children with special educational needs

are less engaged at school compared to their peers without such needs and face considerable social and academic barriers at school.

To explore the potential role of differences in the opportunity to engage in different types of out-of-school activities we include a measure of rural versus urban location and travel time to school (low (less than 10 minutes), medium (10-20 minutes) and high (20+ minutes)). In the case of the former, one might expect that a wider range of structured activities might be available in urban areas, while children who spend considerable periods of time travelling from school might have less time to participate in out-of-school activities.

A number of questions were asked of children, parents and teachers which relate to the activities of children outside the school setting. In line with previous studies, we make a distinction between activities which are predominately structured in nature and organised/overseen by parents (engagement in cultural activities, membership of clubs) and unstructured, unsupervised time which includes more solitary activities like time spent watching TV and playing computer games and group activities like spending time with friends (Elkind 1981, 2006; Postman 1982; Tofler, Knapp and Drell 1999).

The following activities are examined, all reported by the child's primary caregiver (almost always their mother):

Structured:

- Participation in 'cultural' activities in average week – including dance, ballet, music, arts;
- Membership of a sports club;
- Membership of a youth club, such as scouts, girl guides.

Unstructured:

- Time (hours per day) spent watching TV, using a home computer, playing video-games;
- Number of days per week child spends time with friend(s).

Analytical Approach

The analyses presented in this paper are based on data from the first wave of the *Growing Up in Ireland* study. As with all cross-sectional data, we acknowledge the need for caution in attributing causality, as the factors are all measured at the same time-point. However, in the models presented, we examine sets of variables which are at least logically, if not temporally, 'prior' to the outcome in focus. For example, parental social class can be considered to be relatively stable over time so we can regard this background factor as influencing children's school performance. Parental educational resources, out-of-school activities and the child's orientation towards school, in contrast, are likely to change and evolve in response to circumstances and so cannot be regarded as causal factors in the same way. However, the analyses do indicate important associations between such factors and children's academic achievement, potentially highlighting the ways in which gender, class and parenting manifest themselves on a day today basis.

Results

Descriptive statistics highlight important gender and social class differences in the out-of-school lives of children and their participation in structured and unstructured activities[6]. While girls are significantly more likely to participate in cultural activities like music, drama and art, there are also strong variations across social groups (Table

[6] The results also show a relationship between participation in structured or organised out-of-school activities and the time children spend travelling from school – with lower levels of participation in cultural activities and clubs among children spending longer periods of time (typically more than 30 minutes per day) travelling home from school.

1). For example, while 45 per cent of boys from professional backgrounds participate in at least one such activity, this is the case for less than one-in-five boys from semi- and unskilled manual backgrounds. In the case of membership of sports and activity clubs (like scouts and girl guides), we find that boys are more likely to be members of both types of clubs, across all social classes (Table 2). The results also show higher levels of participation in these activities among boys and girls from professional backgrounds. Over four out of five girls from professional backgrounds participate in at least one of these activities; while this is the case for only half of girls from economically inactive households. The results clearly show important social class and gender differences in the extent and nature of children's structured out-of-school activities. In many ways we see the reverse patterns when we consider unstructured activities. Table 3 shows the proportion of children spending more than three hours per day watching TV, more than one hour a day using their computer and more than one hour per day playing video games. Children from working class and non-employed backgrounds are more likely to watch TV for at least three hours per day. In terms of video-games, boys are much more likely to spend at least an hour daily engaging in such pursuits, with boys from working class and unemployed backgrounds particularly likely to be in this group. Working class children also appear to spend greater time doing activities with their friends outside school (Table 4): while one third of boys from semi- and unskilled manual backgrounds spend time with their friends 6-7 days of the week, this is the case for less than a quarter of boys from professional backgrounds. Further, there is some evidence that boys are given greater freedom than girls to engage in activities with their friends outside school.

[Insert Tables 1-4 here]

School Engagement

Three sets of analyses were conducted to identify the factors associated with disliking school (the whole sample, and the sample of males and females separately). Analyses were conducted adding three successive blocks of variables in a multivariate regression model.

1. Characteristics of the child's social background: social class and household income and cultural resources (number of books);
2. Additional factors which may shape the child's potential or opportunity to engage in different activities (chronic health problems or special educational needs, urban/rural location and travel time from school);
3. Structured organised activities and unstructured activities.

Only final models of each set of analyses are presented in Table 5. This approach allows us to assess the extent to which (a) gender tends to exert an effect on attitudes towards school independent of either social class or parental education and (b) the extent to which differences between boys and girls in relation to attitudes towards school systematically vary across social class groups.

[Insert Table 5 here]

Model 1 of Table 5 presents the results for the whole sample and indicates that boys are 2.4 times more likely than girls to report that they never like school, confirming that gender exerts an effect on attitudes towards school independent of either social class or parental education. Social class differences are not apparent, with the exception of the unknown group which largely comprised unemployed households

from which children are more likely to indicate that they never like school. There is also evidence to suggest that children in low income families are somewhat less likely than children from middle income families to report that they never like school, however the differences are slight. Children with special educational needs are significantly more likely than children without special educational needs to report that they never like school (in line with work by McCoy and Banks, forthcoming). There is no effect of cultural resources in the home (books), or geographic variables on school engagement.

There is however, an effect of participation in structured out-of-school activities, even when controlling for social background. Children whose mothers report that they engage in cultural activities are less likely to report that they dislike school. However, there is no effect of club membership (or non-membership) on disliking school. In terms of unstructured out-of-school activities, while there is no effect of time spent on TV viewing, computer usage or activities with friends on disliking school, children who spend more than one hour per day on video games are more likely to report that they dislike school.

For the most part, these patterns hold for both males and females (Models 2, 3 of Table 5). However, there are exceptions. For boys there is an additional class effect which is not evident among girls, as boys from managerial (and to some extent professional) social class backgrounds are less likely than boys from non manual class backgrounds to report that they always dislike school. Furthermore, the relationship between family income and disliking school differs for males and females. Boys living in low income families are significantly less likely to report that they dislike school than boys from middle income families. On the other hand, females from moderately low income families and high income families are more likely to report

that they dislike school than girls from middle income families. The effect of having a special educational need on school engagement is stronger for females than males, all else being equal (1.3 relative to 1.9).

There are also differences in the influence of structured out-of-school activities on school engagement for males and females. Participation in cultural activities has a significant and positive effect on school engagement for males which is not evident among females. Thus, while boys are less likely to participate in such cultural activities, those who do partake in such pursuits are significantly more likely to be positively oriented towards their schooling.

Attainment

As before, three sets of analyses were conducted to determine the factors associated with reading and mathematics test scores (the whole sample, and the sample of males and females separately). Analyses were conducted adding four successive blocks of variables in a multivariate regression model. The first block of variables relates to social and cultural background, the second to chronic health difficulties, special educational needs and regional variables; and the third which relates to structured and unstructured out-of-school activities. In addition, we include the measure of whether the child likes school, as utilised in the earlier model, as a measure of school engagement. Only final models of each set of analyses are presented in Tables 6-7.

Reading Scores

[Insert Table 6 here]

Model 1 in Table 6 indicates that boys achieve higher average reading scores than girls, when controlling for social composition and out-of-school activities. Clear

differences are evident in reading scores across social class and family income groups. Controlling for household income, children from professional and managerial social class backgrounds achieve significantly higher reading scores than those from non-manual social backgrounds, while children from skilled manual backgrounds achieve significantly lower reading scores than those from non-manual social backgrounds. Controlling for social class, household income is clearly predictive of children's reading attainment with substantial gaps evident between those from high income and low income families. While children from low income families have significantly lower reading scores than those from middle income families, children from high income families have significantly higher reading scores than those from middle income families. It would appear that social class and family income have additive effects on children's reading attainment. When educational and cultural resources within the home are added to the model, in keeping with previous research (Marks et al. 2006; Smyth et al., 2010) the number of books in the home is a good predictor of positive educational outcomes. Children living in homes with a small number of children's books have lower reading scores, while those living in households with a large number of children's books have higher reading scores. Children with special educational needs have significantly lower reading scores than those without such learning needs. However, there was no effect of having a chronic health problem on reading attainment. Geographic region also exerts an influence on reading scores as children living in urban areas achieving significantly higher reading scores than children living in rural areas.

When we consider the relationship between structured out-of-school activities and academic achievement in reading we find that children who take part in cultural activities outside school also achieve higher reading scores, again in keeping with

Irish and International research (Bodovski and Farkas, 2008; Smyth et al., 2010). Interestingly, there is also an effect of club membership, indicating that some club membership is more beneficial than more or none. That is, children who are not club members have higher reading scores than children who are members of one club, while children who are members of two clubs have significantly lower reading scores than children who are members of one club. In terms of unstructured out-of-school activities, there is no effect of TV viewership, computer usage or time spent on video games. However, children who spend extensive amounts of time with friends have significantly lower reading scores than children who spend smaller amounts of time with friends. Finally, in the final block, children who are highly disengaged from school, indicating that they never like school, have significantly lower reading scores than children who like school.

For the most part, these patterns hold for both males and females (Models 2, 3 of Table 6), as social, cultural and economic resources operate in the same way for males and females in terms of reading attainment. The main differences emerge in relation to the influence of time spent in activities out-of-school. For boys and girls there is an effect of structured and unstructured activities on reading attainment. However, the effects of different types of structured activities differ for boys and girls. For boys, there is no effect of club membership on reading attainment while for girls there is a clear effect of such membership. That is, girls who are not club members have higher reading scores than girls who are members of one club, while girls who are members of two clubs have significantly lower reading scores than girls who are members of one club.

Mathematics Scores

[Insert Table 7 here]

A similar set of models was conducted using mathematics test attainment as an outcome (Table 7). The findings in relation to mathematics are broadly similar to those for reading so will focus only on the distinctive features. Clearly, among all students, there is greater social differentiation in mathematics attainment than in reading attainment. We see that children from professional and managerial backgrounds achieve significantly higher mathematics scores than children from non-manual backgrounds, while children from skilled manual and semi-unskilled manual backgrounds achieve significantly lower mathematics scores than children from non-manual backgrounds. As with reading scores, household income is clearly predictive of children's mathematics attainment with substantial gaps evident between those from high income and low income families. In terms of structured out-of-school activities, children who take part in cultural activities outside school also achieve higher maths scores, again in keeping with the literature. Interestingly, there is also a differential effect of club membership on mathematics scores, indicating a deviation from the pattern shown when reading scores are examined. What we find here is that children who are members of both sports clubs and youth clubs have significantly lower mathematics scores than children who are members of one club. There is no effect of non membership in clubs on mathematics attainment. This suggests that participation in a wide range of clubs/structured activities has a negative impact on schoolwork. Deviations are also evident in relation to unstructured activities. Children who spend more than 3 hours a day watching television have lower mathematics scores than children who spend less time watching television. Conversely, children who spend more than 1 hour using a computer per day achieve higher mathematics scores than those spending less than an hour a day using their computer. It would also

seem that moderate levels of contact with friends during the week have a positive effect on mathematics scores, with those who engage in activities with friends 4-5 days per week achieving significantly higher mathematics scores than those with lower levels of engagement with friends. Furthermore, intensive engagement with friends has a negative effect on mathematics attainment. Finally, in the final block, children who respond that they never like school have significantly lower mathematics scores.

For the most part, these patterns hold for both males and females (Models 2, 3 of Table 7). It would appear that the effect of social class on mathematics attainment is stronger for boys than girls, however, as before, social, cultural and economic resources operate in the same way for males and females in terms of mathematics scores. The relationship between structured out-of-school activities and mathematics scores are similar for males and females. The main differences however, emerge in relation to time spent in unstructured activities out-of-school. Girls who spend more than 3 hours a day watching television have lower mathematics scores than girls who spend less time watching television, while no such effect exists for males. It would also seem that moderate levels of contact with friends during the week have a positive effect on mathematics scores for boys, with those who engage in activities with friends 4-5 days per week achieving significantly higher mathematics scores than those with lower levels of engagement with friends. Furthermore, intensive engagement with friends has a negative effect on mathematics attainment for females but not for males.

Discussion and Conclusions

In this paper, we consider the influence that participation in structured and unstructured activities has on school engagement and academic achievement. Guided by the conceptual work of concerted cultivation (Lareau 2003), we examine gender and social class differences in out-of-school activities and consider their effect on students' school engagement and academic achievement at age nine. Our findings suggest that both social class and gender make a difference in how parents raise children, particularly in terms of the structure of daily life: there is a clear social gradient in the uptake of structured activities (cultural activities, participation in organised clubs) and unstructured activities (watching television, using computers and video games, spending time with friends). In line with the conceptual work of Lareau (2003), practices associated with concerted cultivation (structured activities) tend to be more typical of middle class groups.

While previous studies have indicated that concerted cultivation practices are more pronounced among girls than boys (see for example Cheadle and Amato 2010), our findings suggest that girls and boys are more likely to participate in certain *types* of structured and unstructured activities rather than structured or unstructured activities per se. Our descriptive findings suggest that while childrearing logics tend to operate within social class categories, there is an additional cultural aspect of gender in the uptake of different types of structured and unstructured out-of-school activities. Furthermore, social class patterns do not always hold for males and females alike. Thus, our findings suggest the need to move beyond explanations of 'concerted cultivation' to explain how out-of-school activities influence school engagement and attainment for boys and girls.

Examining the role of gender, social class and structured and unstructured out-of-school activities, the findings suggest that gender exerts an influence on attitudes

towards school, independent of either social class or household income. Boys are more likely to report that they dislike school and social class differences are more pronounced among boys than girls. However, traditional concerted cultivation practices (structured cultural out-of-school activities) contribute to the greater school engagement of boys but not of girls; it appears boys have more to gain from participating in these activities. This means that although boys are less likely to participate in these activities, when they do, they are significantly more likely to be positively engaged towards school than boys who do not participate in these activities. Adopting structured activities/concerted cultivation practices normally associated with females has a positive effect on the attitudes of boys towards their schooling - 'playing female'. Furthermore, in line with the concerted cultivation argument, some unstructured out-of-school activities (videogames usage) are negatively related with school engagement, for both boys and girls.

In terms of academic achievement, we find that gender exerts an influence on reading and maths attainment, independent of parental social class or parental income. Social class differences for boys and girls do not differ, as students from higher social class backgrounds have higher levels of reading and maths attainment, irrespective of gender. Traditional concerted cultivation practices (participation in cultural activities) exert a positive influence on reading and maths attainment for both boys and girls. However, participation in other structured and unstructured activities has differential effects for boys and girls in maths and reading. These findings lead us to suggest that the processes shaping attainment in maths are somewhat different to those underpinning reading attainment.

Hence, although children's out-of-school time is often divided into structured and unstructured activities it would seem that the *type* of structured activities in which

children engage influences school engagement. Perhaps structured activities can be further divided into activities associated with high and low financial costs. These findings show that participation in traditional concerted cultivation practices often associated with high costs appear to positively impact on reading and maths scores for boys and girls. As mentioned, participation in structured cultural activities has a particular impact on boys' school engagement. However the impact of participation in other low cost structured activities such as sports, scouts and guides varies according to gender with girls' academic achievement negatively impacted by high levels of participation in low cost structural activities. Overall, the results highlight differences in the out-of-school lives of boys and girls from different social backgrounds, and reveal important processes shaping and preserving social inequality in educational attainment. It is clear that excessive demands being placed on children, or what has been termed the 'hurried child', may hamper academic efforts, and perhaps other aspects of children's wellbeing (Tofler et al. 1999; Rosenfeld and Wise, 2000; Postman, 1982). One could also ask whether broader skills children gain from such wide ranging out-of-school activities are sufficiently valued and rewarded both in the educational context and in society.

Table 1: Participation in Organised Cultural Activities (Dance Ballet, Music, Arts etc) in Average Week (Mother's Responses)

	Professional	Managerial/Technical	Non-Manual	Skilled Manual	Semi-Unskilled Manual	Non-Employed	Total
Boys	44.9	39.5	24.6	24.7	18.2	22.2	30.7
Girls	78.5	74.2	62.0	66.1	56.4	42.9	64.5
Total	59.3	55.7	42.5	45.0	39.6	33.2	47.3

Table 2: Participation in Organised Sports Club/Scouts/Guides

	Professional		Managerial		Non Manual		Skilled Manual		Semi-Unskilled Manual		Non-Employed		Total	
Not a member of either	12.1		14.8		21.8		22.6		31.7		39.1		22.0	
Sports Club or Scouts/Guides	72.8		72.1		68.5		69.1		60.6		52.8		67.4	
Sports Club & Scouts/Guides	15.1		13.1		9.6		8.3		7.8		8.1		8.1	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Not a member of either	7.0	18.5	10.6	19.5	12.9	31.5	14.4	31.3	25.7	36.5	27.4	49.5	14.7	29.7
Sports Club or Scouts/Guides	77.7	66.6	77.9	65.6	78.5	57.8	77.0	60.8	65.8	56.5	63.0	43.7	75.0	59.4
Sports Club & Scouts/Guides	15.3	14.9	11.5	14.9	8.6	10.8	8.6	7.9	8.5	7.1	9.6	6.7	10.4	10.9

Table 3: Hours of TV, Computer Usage or Video Games

	Professional		**Managerial**		**Non Manual**		**Skilled Manual**		**Semi-Unskilled Manual**		**Non-Employed**		**Total**	
More than 3 hrs/day TV	5.7		8.4		11.7		10.9		13.4		16.5		10.8	
Less than 3 hrs/day TV	94.3		91.6		88.3		89.1		86.6		83.5		89.2	
More than 1 hr/day using home computer	13.3		12.5		12.2		12.5		15.3		16.2		13.0	
Less than 1 hr/day using home computer	86.7		87.5		87.8		87.5		84.7		83.8		87.0	
More than 1 hr/day using video games	16.1		18.4		22.1		22.5		23.7		27.3		21.2	
Less than 1 hr/day using video games	83.9		81.6		77.9		77.5		76.3		72.7		78.8	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
More than 3 hrs/day TV	6.0	5.6	8.7	8.1	10.5	12.9	11.5	10.5	15.8	11.6	17.6	15.6	10.9	10.6
Less than 3 hrs/day TV	94.0	94.4	91.3	91.9	89.5	87.1	88.5	89.5	84.2	88.4	82.4	84.4	89.1	89.4
More than 1 hr/day using home computer	15.4	13.6	11.5	14.5	13.7	13.8	12.9	11.6	18.2	12.9	12.9	19.5	13.3	14.3
Less than 1 hr/day using home computer	84.6	86.4	88.5	85.5	86.3	86.2	87.1	88.4	81.8	87.1	87.1	80.5	86.7	85.7
More than 1 hr/day using video games	22.3	7.6	25.6	10.2	28.8	14.9	33.2	11.3	36.9	13.3	41.0	15.3	30.0	12.1
Less than 1 hr/day using video games	77.7	92.4	74.4	89.9	71.2	85.1	66.8	88.7	63.1	86.7	59.0	84.7	70.0	87.9

Table 4: Activities with Friends Outside of School Hours (Mother's Response)

	Professional	**Managerial**	**Non Manual**	**Skilled Manual**	**Semi-Unskilled Manual**	**Non-Employed**	**Total**
Never	5.4	5.5	6.0	7.3	7.7	5.2	6.1
1 Day/Week	16.3	15.9	17.5	17.0	12.6	12.6	15.7
2-3 Days/Week	36.9	37.1	32.0	35.7	31.1	23.2	33.5
4-5 Days/Week	21.9	18.0	19.3	13.9	17.9	19.9	18.1
6-7 Days/Week	19.5	23.5	25.1	26.0	30.7	39.0	26.5

	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Never	5.5	5.3	5.0	6.1	5.8	6.2	7.9	6.7	8.5	7.2	5.1	5.5	6.0	6.2
1 Day/Week	13.2	20.5	16.4	15.4	14.5	20.8	17.1	16.9	11.1	13.6	12.5	12.6	15.0	16.4
2-3 Days/Week	36.7	37.3	35.3	39.2	32.2	31.9	32.7	38.9	29.1	32.5	26.6	20.4	32.8	34.3
4-5 Days/Week	20.8	23.4	17.4	18.7	20.4	18.0	13.9	13.9	18.4	17.6	16.6	22.8	17.7	18.5
6-7 Days/Week	23.8	13.5	25.9	20.7	27.1	23.1	28.4	23.5	32.9	29.1	39.3	38.8	28.5	24.5

Table 5: Logistic Regression model of the factors influencing not liking school among 9 year-old children

	Model 1 All	Model 2 Boys	Model 3 Girls
Constant	-3.332(.211)***	-2.298 (.232)***	-3.987 (.396)***
Gender *(Ref: Girls)*			
Boys	0.862 (.115)***		
Social Class *(ref: Non-manual)*			
Professional	-0.218 (.185)	-0.349 (.217)^	0.251 (.362)
Managerial	-0.177 (.137)	-0.299 (.159)*	0.212 (.279)
Skilled manual	-0.037 (.164)	-0.079 (.192)	0.181 (.325)
Semi- unskilled	0.165 (.185)	0.064 (.225)	0.456 (.340)
Unknown	0.663 (.200)***	0.656 (.244)**	0.790 (.366)**
Family Income *(ref: middle quintile)*			
Lowest Quintile	-0.420 (.193)**	-0.717 (.236)**	0.320 (.359)
2nd Lowest	0.191 (.156)	-0.019 (.186)	0.777 (.311)**
2nd highest	-0.043 (.159)	-0.044 (.180)	0.014 (.352)
Highest	0.036 (.160)	-0.122 (.187)	0.520 (.324)*
Income Missing	0.403 (.189)**	0.389 (.217)*	0.558 (.401)
Children's Books in Home *(ref: middle number)*			
Low	0.164 (.167)	0.289 (.188)	-0.337 (.397)
High	-0.065 (.107)	-0.048 (.129)	-0.116 (.198)
Special Educational Need *(ref: No SEN)*			
SEN	0.405 (.132)**	0.309 (.156)**	0.663 (.251)**
Ongoing chronic health problem ***(****ref: None)*			
Health problem	0.133 (.148)	0.204 (.170)	-0.175 (.319)
Region *(Ref: Rural location)*			
Urban	-0.080 (.102)	-0.104 (.123)	-0.016 (.187)
Travel time from school (*ref: medium*)			
Low	0.090 (.112)	0.108 (.134)	0.044 (.206)
High	0.002 (.168)	-0.002 (.200)	0.026 (.315)
Structured activities:			
Child engages in cultural activities (*ref: no*)			
Yes	-0.377 (.109)***	-0.432 (.136)***	-0.271 (.190)
Member of sports club/scouts/guides (*ref: one***)**			
Child not member of sport club or scouts/guides etc.	0.018 (.160)	-0.098 (.203)	0.272 (.264)
Child member of both sport club and scouts/guides etc.	0.049 (.132)	0.136 (.168)	-0.052 (.217)
Unstructured activities:			
Controlled Hours TV, Computer Usage, Video Games			
More than 3 hrs/day TV	-0.131 (.166)	-0.303 (.208)	0.280 (.277)
More than 1 hr/day using home computer	0.124 (.138)	0.090 (.169)	0.174 (.243)
More than 1 hr/day video games	0.311 (.114)**	0.274 (.128)**	0.425 (.248)*
Activities with friends: (*ref: 2-3 days/wk***)**			
Never/1 day/wk	0.017 (.133)	0.123 (.158)	-0.227 (.249)
4-5 days/wk	-0.163 (.148)	-0.035 (.174)	-0.467 (.288)^
6-7 days/wk	0.083 (.126)	0.046 (.152)	0.189 (.227)
Model X^2	206.188***	78.615***	45.392***

R^2	.068	.043	.043
N	8,568	4,164	4,404

***** Significance at 0.1%, **Significance at 5%, *Significance at 10%, ^Approached significance**

Table 6: OLS Regression model of the factors influencing reading test performance among 9 year-old children

	All	Boys	Girls
Constant	-0.129 (.044)**	-0.058 (.059)	-0.113 (.059)**
Gender *(Ref: Girls)*			
Boys	0.086 (.021)***		
1. SOCIAL/CULTURAL BACKGROUND			
Social Class *(ref: Non-manual)*			
Professional	0.287 (.035)***	0.313 (.051)***	0.262 (.049)***
Managerial	0.128 (.027)***	0.163 (.040)***	0.093 (.037)**
Skilled manual	-0.129 (.034)***	-0.092 (.050)*	-0.161 (.045)***
Semi- unskilled	-0.064 (.040)	-0.079 (.061)	-0.051 (.053)
Unknown	-0.008 (.050)^	-0.067 (.075)	0.044 (.066)
Family Income *(ref: middle quintile)*			
Lowest Quintile	-0.157 (.037)***	-0.112 (.055)**	-0.190 (.050)***
2nd Lowest	-0.016 (.033)	-0.054 (.049)	0.018 (.045)
2nd highest	0.093 (.031)**	0.088 (.045)**	0.096 (.042)**
Highest	0.141 (.031)***	0.112 (.045)**	0.171 (.043)***
Family Income missing	0.074 (.042)*	0.091 (.061)	0.055 (.058)
Children's Books in Home *(ref: middle number)*			
Low	-0.240 (.039)***	-0.227 (.053)***	-0.265 (.059)***
High	0.274 (.022)***	0.262 (.032)***	0.285 (.030)***
2. OPPORTUNITY/CAPACITY TO ENGAGE IN ACTIVITIES			
Special Educational Need *(ref: no SEN)*			
SEN	-0.855 (.032)***	-0.861 (.044)***	-0.857 (.047)***
Ongoing chronic health problem *(ref: none)*			
Health problem	-0.020 (.033)	0.017 (.046)	-0.062 (.048)
Region *(Ref: rural location)*			
Urban	0.095 (.020)***	0.112 (.030)***	0.077 (.028)**
Travel time from school (*ref: medium*)			
Low	0.012 (.022)	0.010 (.032)	0.012 (.030)
High	-0.002 (.034)	0.076 (.049)	-0.080 (.046)*
3. STRUCTURED AND UNSTRUCTURED ACTIVITIES			
Structured activities:			
Child engages in cultural activities (*ref: no*)			
Yes	0.143 (.021)***	0.134 (.031)***	0.150 (.029)***
Member of sports club/scouts/guides (*ref: one***)**			
Child not member of sport club or scouts/guides etc.	0.064 (.030)**	0.058 (.046)	0.071 (.040)*
Child member of both sport club and scouts/guides etc	-0.082 (.026)**	-0.065 (.046)	-0.084 (.032)**
Unstructured activities:			
Controlled Hours TV, Computer Usage, Video Games			
More than 3 hrs/day TV	0.000 (.034)	-0.013 (.051)	0.010 (.047)
More than 1 hr/day using home computer	0.046 (.029)^	0.068 (.044)	0.023 (.039)
More than 1 hr/day video games	-0.018 (.026)	-0.043 (.034)	0.025 (.044)
Activities with friends: *(ref: 2-3 days/wk)*			
Never/1 day/wk	-0.010 (.026)	-0.042 (.040)	0.008 (.035)
4-5 days/wk	0.031 (.028)	-0.005 (.041)	0.061 (.037)^
6-7 days/wk	-0.104 (.026)***	-0.072 (.037)**	-0.145 (.037)***

School Engagement (*ref: likes school)*			
Never likes school	-0.283 (.043)***	-0.255 (.052)***	-0.341 (.076)***
Adjusted R^2	.207	.208	.207
N	8,355	4,051	4,303

***** Significance at 0.1%, **Significance at 5%, *Significance at 10%, ^Approached significance**

Table 7: OLS Regression model of the factors influencing mathematics test performance among 9 year-old children

	All	Boys	Girls
Constant	-0.815 (.042)***	-0.669 (.058)***	-0.770 (.056)***
Gender *(Ref: Girls)*			
Boys	0.196 (.021)***		
1. SOCIAL/CULTURAL BACKGROUND			
Social Class *(ref: Non-manual)*			
Professional	0.221 (.034)***	0.248 (.050)***	0.189 (.046)***
Managerial	0.098 (.026)***	0.131 (.039)***	0.065 (.035)*
Skilled manual	-0.092 (.032)**	-0.110 (.049)**	-0.077 (.043)*
Semi- unskilled	-0.104 (.038)**	-0.125 (.060)**	-0.089 (.050)*
Unknown	-0.081 (.048)*	-0.104 (.073)	-0.063 (.063)
Family Income *(ref: middle quintile)*			
Lowest Quintile	-0.111 (.036)**	-0.107 (.054)**	-0.114 (.048)**
2nd Lowest	0.006 (.032)	0.039 (.048)	-0.023 (.042)
2nd highest	0.060 (.030)**	0.064 (.044)	0.061 (.040)
Highest	0.105 (.030)***	0.117 (.044)**	0.096 (.040)**
Income unknown	0.036 (.040)	0.103 (.060)*	-0.031 (.055)
Children's Books in Home *(ref: middle number)*			
Low	-0.174 (.038)***	-0.199 (.052)***	-0.130 (.056)**
High	0.131 (.021)***	0.127 (.031)***	0.135 (.028)***
2. OPPORTUNITY/CAPACITY TO ENGAGE IN ACTIVITIES			
Special Educational Need *(ref: no SEN)*			
SEN	-0.704 (.031)***	-0.728 (.043)***	-0.666 (.045)***
Ongoing chronic health problem *(ref: none)*			
Health problem	-0.055 (.032)*	-0.039 (.045)	-0.069 (.045)
Region *(Ref: Rural location)*			
Urban	0.059 (.020)**	0.076 (.030)**	0.046 (.026)*
Travel time from school *(ref: medium)*			
Low	-0.017 (.021)	-0.007 (.032)	-0.023 (.029)
High	-0.086 (.032)**	-0.082 (.048)*	-0.089 (.044)**
3. STRUCTURED AND UNSTRUCTURED ACTIVITIES			
Structured activities:			
Child engages in cultural activities *(ref: No)*			
Yes	0.098 (.020)***	0.108 (.030)***	0.084 (.028)**
Member of sports club/scouts/guides *(ref: one)*			
Child not member of sport club or scouts/guides etc.	0.036 (.029)	0.033 (.045)	0.043 (.038)
Child member of both sport club and scouts/guides etc.	-0.133 (.025)***	-0.186 (.045)***	-0.109 (.030)***
Unstructured activities:			
Controlled Hours TV, Computer Usage, Video Games			
More than 3 hrs/day TV	-0.072 (.033)**	-0.070 (.050)	-0.075 (.044)*
More than 1 hr/day using home computer	0.060 (.028)**	0.068 (.043)^	0.056 (.037)
More than 1 hr/day video games	-0.027 (.025)	-0.011 (.033)	-0.044 (.041)
Activities with friends: *(ref: 2-3 days/wk)*			
Never/1 day/wk	-0.003 (.025)	-0.019 (.039)	0.008 (.033)
4-5 days/wk	0.066 (.027)**	0.096 (.040)**	0.040 (.035)
6-7 days/wk	-0.046 (.025)*	-0.012 (.037)	-0.085 (.035)**

School Engagement *(ref: likes school)*			
Never likes school	-0.251 (.041)***	-0.217 (.051)***	-0.315 (.073)***
Adjusted R^2	.150	.163	.126
N	8,448	4,091	4,356

***** Significance at 0.1%, **Significance at 5%, *Significance at 10%, ^Approached significance**

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