

## **Chapter 7**

### **Uncertainty in educational and career aspirations: gender differences in young people**

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## **Abstract**

Drawing upon data from 2 British age cohorts born in 1970 and 1990, this chapter examines gender and socio-historical differences regarding uncertainty in the educational and career aspirations of young people. Despite differences in the age of assessment and measurement, findings suggest that similar background characteristics are associated with uncertain aspirations in the 2 age cohorts. Males were more uncertain of their educational aspirations than were females. Uncertainty was also associated with growing up in a relatively disadvantaged family, with parents who did not expect their children to continue in education, as well as with low academic attainment, low levels of school motivation and lack of belief in one's own ability. However, findings indicated differences in the associated outcomes of uncertain aspirations between the 2 age cohorts. In the earlier born cohort, young people with uncertain aspirations were more likely to be not in education, employment or training (NEET), while there were no differences in NEET due to uncertain aspirations in the later born cohort. The findings point towards a female advantage regarding certainty in aspirations as well as a prolonged period of career exploration in the later born cohort.

## **Uncertain Aspirations: Gender differences in young people**

In recent years, researchers have highlighted the increasing uncertainty of young people regarding their education and career development, attributed to changes in the global market (Kalleberg, Reskin, & Hudson, 2000; Mills & Blossfeld, 2003). Globalization has tightened the availability of jobs, particularly for those aged 16 to 24 (Bynner, 2001; Danziger & Ratner, 2010). Young people are now under increasing pressure to continue in full-time education and acquire formal qualifications in order to succeed in a competitive labor market, and educational and career routes have become more complicated and protracted (Blossfeld, 2005; Bynner, 2005). These changes are likely to generate uncertainty for young people who lack the knowledge and experience concerning established routes to success, especially those from more disadvantaged backgrounds (Appadurai, 2004).

Young men and women are likely to have different responses to such uncertainty (Mills & Blossfeld, 2003). Decreased employment opportunities, lower wages, increased debt, and higher housing prices have made it more difficult for young men to assume the responsibilities of adulthood including marriage and supporting a family, which may be associated with greater uncertainty about their future prospects (Danziger & Rouse, 2007). In contrast, relatively greater economic benefits of college and improved labor market opportunities entail that young women are more likely to invest in their education and careers rather than partnership and parenthood (Danziger & Rouse, 2007; Goldin, Katz, & Kuziemko, 2006).

While there is a wealth of evidence that high educational and career aspirations during adolescence increase educational achievement, occupational prestige and wage attainments in adulthood (Clausen, 1993; Sewell & Hauser, 1975; Schoon & Parsons, 2002), relatively little research has focused on young people with uncertain aspirations (i.e., those who do not know what they want to do for their future educational and career choices), especially regarding

gender differences in uncertainty (Gutman & Schoon, 2012; Gutman, Schoon & Sabates, 2012). In this chapter, we address this evidence gap and examine to what extent males and females differ regarding uncertainty in their aspirations, taking into account the antecedents as well as associated outcomes of uncertain educational and career aspirations. We focus on the aspirations of young people, which can be distinguished from career expectations. While expectations are considered to reflect more realistic evaluations of available opportunities, aspirations tap more into the hopes of what one wants to achieve (Gottfredson, 1981).

Our study adopts a developmental-contextual approach (Vondracek, Lerner & Schulenberg, 1983; Schoon, 2006), taking into account multiple and interlinked levels of influence on career development, the importance of formative years in shaping later development, the role of individual agency involving preference and capabilities, as well as co-regulation by significant others (e.g., parents, teachers or career advisers). We furthermore take into account that career choice is highly sensitive to historical and economic conditions (Mortimer, Zimmer-Gembeck, Holmes, & Shanahan, 2002). To assess similarities and differences in associations across a changing socio-historical context, we draw upon 2 age cohorts: the 1970 British Cohort Study (BCS70) and the Longitudinal Study of Young People in England (LSYPE) born in 1989/90. Comparing experiences in 2 age cohorts enables us to examine gender differences across contexts and to establish generalizability of findings.

### **The role of a changing socio-historical context**

The 2 age cohorts examined in this chapter grew up during two distinct periods regarding the development of the post-compulsory education and training system in England, and changing expectations with regards to educational participation. The 1970 cohort reached compulsory school leaving age (e.g., age 16) in the mid-1980s, following a major economic recession at the beginning of the decade. Compared internationally, the participation rate in England was

low with less than 50% of learners staying-on in education after the age of 16 (Machin & Vignoles, 2006). It was only at the end of the 1980s that the English education and training system changed gear towards higher levels of educational participation, both beyond the age of 16 and in relation to higher education. The 1989/90-age cohort, on the other hand, reached school leaving age during a period of economic growth. By 2004 (when they were 14/15), expectations to stay-on in education and training beyond age 16 had become more or less the norm, regardless of social background or previous academic attainment (Schoon, 2010). In 2008, however, the 1989/90-age cohort found itself in the midst of a sustained economic recession, providing a further impetus to education participation given the rising unemployment rates for 18 to 24 year olds (Office for National Statistics, 2010). We thus expect increasing aspirations for higher education—but also increasing uncertainty regarding career opportunities.

### **Antecedents of Uncertain Educational and Career Aspirations**

To gain a better understanding of the antecedents of uncertain aspirations, we examine a number of demographic and social factors which have been related to the formation of aspirations in previous studies.

#### **Family Socioeconomic Status**

Young people from working-class backgrounds generally report lower educational aspirations than their more privileged peers, even after controlling for academic ability (Kerckhoff, 2004; Schnabel, Alfeld, Eccles, Koller, & Baumert, 2002; Schoon, 2010).

Young people from lower socioeconomic backgrounds also report greater uncertainty in their aspirations than those from higher socioeconomic backgrounds (Croll, Attwood, Fuller, & Last, 2008; Gutman & Schoon, 2012). Evidence also suggests that the negative influence of

economic hardship on teenage job aspirations is stronger for males than females (Schoon, Martin, & Ross, 2007). We thus would expect that young men from relatively disadvantaged family backgrounds may have greater uncertainty regarding their career aspirations than females in similar circumstances.

### **Parental expectations**

Parental expectations are another important influence on young people's aspirations, indicating the importance of co-regulation and the interactions between the young person and significant others (Eccles & Wigfield, 2002; Goodman & Greg, 2010; Schoon, 2006).

Children whose parents have higher expectations for them also tend to have higher aspirations for themselves (Mau & Bikos, 2000; Rhea & Otto, 2001; Schoon, 2010).

However, using data from the LSYPE, Schoon (2010) found that teen and parental expectations are less strongly associated among girls than among boys, suggesting that compared to girls, boys might be more dependent on parental support and encouragement when deciding about their future.

### **Prior Attainment**

Aspirations (both of oneself and of one's parents) are also shaped by previous attainment.

Aspirations may be raised for young people who do well in school, whereas they may be lowered for those who have poor school performance (Jencks, Crouse, & Mueser, 1983; Mau & Bikos, 2000; Sacker, Schoon, & Bartley, 2002). However, Schoon (2010) found that the association between academic attainment and education expectations was stronger for boys than for girls, suggesting that girls' aspirations may be less strongly influenced by their previous academic attainment than are boys.

### **School Motivation and Perceived Ability**

School motivation has also been associated with higher career aspirations and exam performance (Schoon et al., 2007). Young people who have uncertain aspirations about their educational plans are more likely to report lower school motivation than young people who plan to continue in school (Croll et al., 2008; Gutman et al., 2012). Furthermore, research has demonstrated that perceptions of one's own ability predict the occupational and academic aspirations of children and young people (Bandura, Barbaranelli, Caprara, & Pastorelli, 2001). Girls tend to have higher school motivation but lower perceptions of their abilities compared to boys (Bandura et al., 2001; -, Schoon et al., 2007). We thus expect that for males the association between school motivation and uncertain aspirations may be stronger than for females, while for females the association between self-perceived ability and uncertainty may be stronger than for males.

### **Career Advice**

Evidence also suggests that information about educational and career options and opportunities is associated with the aspirations of young people particularly those who lack opportunities for more established routes to success (Wigfield, Lutz, & Wagner, 2005). For the older cohort career advice was provided in the school through teachers as well as career officers, as well as through special youth training schemes. In 2001 a special career advice service, *Connexions*, has been introduced in the UK offering both individual support and career advice to young people. *Connexions* is especially targeted towards the most disengaged and disadvantaged groups, i.e., 16-18 year-olds who are not in education, employment or training (NEET) (Hoggart & Smith, 2004). These services were discontinued in 2010, yet they were on offer for young people in the later born cohort during secondary schooling. We would expect that in both cohorts the usefulness of the career advice, as

perceived by the students, might be associated with lower uncertainty in aspirations (see also Gutman et al., 2012; Gutman & Schoon, 2012).

## **Consequences of Uncertain Educational and Career Aspirations**

Different viewpoints exist concerning the role of uncertainty on the educational and career outcomes of young people. According to Kerckhoff (2003), uncertainty may lead to prolonged schooling without the attainment of qualifications and floundering in the labor market. Arnett (2004), on the other hand, views uncertainty as part of a formative period for adolescents who are exploring possible life directions without detrimental consequences. This may be particularly true for certain groups of young people, especially young people from relatively privileged backgrounds who can more easily afford a period of extended exploration (Bynner, 2005). Furthermore, females may benefit from more flexibility in their aspirations as their career trajectories tend to be more complex than males' because of multiple and competing commitments regarding family and work-related roles (Vondracek, Lerner, & Schulenberg, 1983; Schoon et al., 2007).

Recent research, however, indicates that uncertainty in educational aspirations is associated with negative educational outcomes (Croll, 2009; Gutman et al., 2012). In the British Household Panel Survey (BHPS), born between 1979 and 1989, for example, Croll (2009) found that uncertainty at age 13 about whether to continue in education past compulsory schooling age or not was highly predictive of their actual behavior 3 years later. In LSYPE, Gutman et al. (2012) found that 15 year olds who were uncertain about continuing in school past compulsory schooling age had lower scores on their school exams at age 16 and were less likely to continue in education at age 18.

For uncertainty in career aspirations, there is also evidence that uncertainty at age 16 may place young people at risk, such as lower educational attainment, difficulties in

establishing oneself in the labor market (as indicated by NEET between ages 16 and 18 years), later employment instability and a wage penalty (Staff, Harris, Sabates, & Briddell, 2010; Yates, Harris, Sabates, & Staff, 2011). These findings were observed among young people born between 1970 and 1974. In the more recent LSYPE cohort, however, uncertain career aspirations at age 13/14 were associated with better educational outcomes for disadvantaged young people who remained in the education system beyond the of age 16, offering greater flexibility to explore career options while still being engaged in educational pursuits (Gutman & Schoon, 2012). Together, these findings indicate that the consequences of uncertainty may depend on individual characteristics and age of the young person as well as the socio-historical context in which they mature.

## **Research Questions**

Previous research examining uncertain aspirations suggests that there is likely to be variation in the both the background characteristics and consequences of uncertainty. In this chapter, we are interested in exploring the gender differences in uncertain aspirations in two different age cohorts growing up in distinct social and economic periods. In order to do this, we examine background characteristics including socioeconomic background, prior academic attainment, parental educational expectations, school motivation, perceived ability and usefulness of career advice as well as being NEET between ages 16 and 18.

In summary, we address the following questions, comparing evidence in 2 age cohorts:

1. What background characteristics are associated with uncertainty in educational and occupational aspirations, and do those differ by gender by period?

2. Do young men and women with uncertain aspirations have a greater likelihood of becoming NEET relative to those who hold high aspirations? Has this association changed in a changing socio-historical context?

## Method

### Data

The study was based on the 1970 British Cohort Study (BCS70) and the Longitudinal Study of Young People in England (LSYPE) born in 1989/90. BCS70 comprises data collected from large nationally representative samples of over 16,000 individuals born in a single week in 1970 who have been followed from birth to adulthood (Elliott & Shepherd, 2006). Data sweeps have taken place at birth and when cohort members were aged 5, 10, 16, 26, 30, 34 and 38 years, using personal interviews and self-completion questionnaires.<sup>1</sup> At age 16, when questions about aspirations for the future were asked, the study was affected by a teacher strike. This led to a reduced sample, which did however not differ greatly from the target population, despite a slight underrepresentation of males and the most disadvantaged (Elliott & Shepherd, 2004). In order to minimize additional loss of information we imputed the mean value to continuous variables and additional category for categorical variables. Mean imputation can only provide unbiased estimates if missing is at random, which is a strong assumption not supported by the data. We thus only imputed based on the sample selected for estimation, which contained young people with complete information on aspirations and educational outcomes. With this strategy, our aim was to minimize the potential impact of mean imputation on youth with uncertain aspirations (Little & Rubin, 2002). Once imputations were made, we selected young people who had certain and high aspirations and

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<sup>1</sup> For more details see [www.cls.ioe.ac.uk](http://www.cls.ioe.ac.uk)

those with uncertain aspirations for our analytic sample. The size of the analytic sample for BCS70 was 1,111 males and 1,516 females regarding educational aspirations and 764 males and 1,211 females for career aspirations.

LSYPE is a panel study of over 21,000 young people born between September 1, 1989 and August 31, 1990. Sample members were all young people in year 9 (age 13/14) or equivalent in all schools in England in February 2004. Annual face-to-face interviews had been conducted with young people and their parents since 2004, and linkage was available to other administrative data, such as those held on the National Pupil Database.<sup>2</sup> Special sample weights were applied to account for differential selection probabilities and non-response bias. We use information from the first 5 waves of the dataset, from ages 13/14 to 17/18 years.

As all longitudinal studies, LSYPE experienced sample loss between the multiple waves. The analytic sample in both age cohorts comprises cohort members for whom we have complete data. The samples were further reduced to include only those young people who have certain, high versus uncertain aspirations (as in BCS70). For educational aspirations the analytic sample includes 1,766 males and 1,898 females. For career aspirations, our sample includes 1,972 males and 2,007 females.

## **Measures**

Table 7.1 provides the means, standard deviations, and percentages for each of the measures.

>**Table 7.1 Here**<

## **Uncertain Aspirations**

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<sup>2</sup> For more information see: [www.esds.ac.uk/longitudinal/access/lstype/L5545.asp](http://www.esds.ac.uk/longitudinal/access/lstype/L5545.asp)

*Uncertain Educational Aspirations* were measured differently and at different ages in the 2 age cohorts. In the LSYPE, young people were asked at age 13/14 whether they wanted to continue in school after age 16. Responses included (1 = yes, continue in education; 2 = no, leave education; 3 = don't know). In order to create a measure of uncertainty for continuing in education past compulsory schooling age, responses were dummy-coded into a dichotomous variable, differentiating those with uncertain aspirations (1) and those who wanted to continue in education (0), excluding those who were certain about leaving school. In BCS70 cohort members were asked at age 16 whether they planned to continue in education after age 18. Responses included (1 = yes; 2 = no; and 3 = I do not know). As for the LSYPE, responses were also recoded into those who were uncertain about continuing in education after age 18 and those who were uncertain about this. We excluded young people who were certain about leaving school at age 18. Notice that in LSYPE children were asked about uncertainty about continuing beyond compulsory education, whereas for BCS70 uncertainty was about continuing in higher education.

*Uncertain Career Aspirations* were also assessed differently in the 2 age cohorts. In the LSYPE, young people were asked at age 13/14: "Do you have any ideas of the kind of job you want to do after full-time education?" Response alternatives included "yes," "no" and "do not know." Our measure of uncertain career aspirations differentiates between those who had an idea about their future job and those who had no ideas or did not know. In addition it was possible to identify the status of the aspired for occupation by coding up the open-ended question: "What job do you want to do after you have finished full-time education?" using the National Statistics Socio-economic Classification (NS-SEC). In our coding we differentiated professional and managerial occupations versus others (i.e., skilled occupations, semi-skilled and unskilled occupations). In order to create a measure of uncertainty for career aspirations, responses were dummy-coded into a dichotomous variable,

differentiating those with uncertain aspirations (1) and those who had aspirations for a professional career (0), excluding those who were certain about having a skilled or semi-skilled occupation. For the BCS70, cohort members were asked at age 16 to report the kind of jobs they would like to do later on in life. There were several pre-formulated response alternatives, ranging from professional occupations, managerial, teaching, administrative posts, to semi- or unskilled jobs. One of the possible response alternatives was “I cannot decide” which was our measurement of uncertainty in career aspirations for BCS70 cohort members. We also selected young people who had aspirations for professional occupations in later life. Notice that uncertainty in future jobs referred to jobs after completing full-time education in LSYPE, whereas for BSC70 it referred to jobs later in life. In both cohorts we identified young people with high career aspirations, i.e., aspiring for a professional or managerial job, and we compared them to those who were uncertain in their career aspirations.

It is important to highlight that the age of assessment and the wording and meaning of the questions regarding educational and occupational aspirations differed between the 2 datasets, and that the data cannot be directly compared. Instead we focused on functional equivalence, and did not to make statistical comparisons between the cohorts. Nevertheless, we were still able to discuss similarities and differences in the background characteristics and outcomes associated with uncertainty in aspirations.

### **Background Characteristics**

*Parental Social Background* was measured using operational categories of NS-SEC aggregated to produce the approximate Social Class based on Occupation (see Standard Occupational Classification, 1991). Six categories were aggregated into 4 groups

differentiating professional and managerial occupations; skilled occupations; semi-skilled and unskilled occupations; as well as being unemployed or never worked.

*Ethnic Background* was gathered from young people, enabling us to examine differences between white (0) versus other (1) young people. In BCS70 there are only about 5% of ethnic minority youths, reflecting the ethnic composition at the time of their birth (Ferri, Bynner, & Wadsworth, 2003), not allowing us to break up the groups further. LSYPE is more ethnically diverse, as there has been oversampling for ethnic minority groups. For both cohorts we used a similar coding scheme differentiating between white versus other for comparison purposes.

*Prior Achievement* was measured using assessments for the student's math and reading ability at age 10/11. In BCS70, specially designed assessments were used to test academic abilities (see Schoon, 2006). In LSYPE, Key Stage 2 test scores from the National Pupil Database were accessed. The test data has been z-standardised to enable comparison across cohorts.

*Parental Expectations* were measured as parents' education expectations for their child. In LSYPE, parents were asked when their child was 13/14 what they would expect their child to do when reaching school leaving age (i.e., age 16). High parental expectations were assigned to parents who expected the cohort member to stay in education after age 16. In BCS70 parents were asked about their expectations regarding further education beyond age 18 when their child was aged 16 years. High parental expectations were assigned to parents who expected the cohort member to stay in education after age 18.<sup>3</sup>

*School Motivation* was measured with the same 5-item academic motivation scale in both cohorts (sample items: school is a waste of time; I like being at school) yet different

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<sup>3</sup> The difference in parental expectations between LSYPE and BCS70 is due to the nature of uncertainty in educational aspirations for young people mentioned above. In LSYPE, uncertainty refers to staying on after completion of compulsory schooling whereas in BCS70 uncertainty refers to education after age 18.

response formats were used. Questions were assessed at age 13/14 for the LSYPE and at age 16 for BCS70. Scores were z-standardized for further analysis and a high score indicates positive school motivation in both cohorts.

*Perceived Ability* measured the young person's perceptions of his/her own abilities in school subjects (sample items: how good are you at maths; how good are you in English). Questions were assessed at age 13/14 for the LSYPE and at age 16 for BCS70. Questions were z-standardised to enable comparison across cohorts.

*Usefulness of Career Advice* assessed the perceptions of the young person regarding career advice given at school. In the LSYPE, young people at age 13/14 were asked whether they found it useful to talk about plans for future study with Connexions (i.e., a governmental organization that provides advice and information for young people) and their teachers. In the BCS70, young people at age 16 responded whether they found the information and advice provided by career officers or youth training schemes useful. In both studies the same response format was used (a Likert scale ranging from 1 = not at all useful to 4 = useful).

## **Outcomes**

*NEET Status between ages 16-18* was a dichotomous variable. In the LSYPE, a young person was defined as NEET if they were not in part-time or full-time education, employment or training at either Wave 4 (assessed when young people were age 16/17) and/or Wave 5 (assessed when most young people were age 17/18). In BCS70, "NEET status" is defined as spending a combined total of 6 months (or one quarter of the 24 months between age 16 and 18) outside of work, education, or training. Young people who worked part-time were not counted as NEET using employment histories between ages 16 and 18 (see Bynner & Parsons, 2002; Yates, Harris, Sabates, & Staff, 2011).

## **Analytic Strategy**

For the descriptive statistics, ANOVA was used to examine gender differences in all of the variables included in the analysis. To investigate background factors that predict uncertainty in educational and career aspirations, we employed a logit model. This estimation technique is useful for understanding which factors increase (or decrease) the probability of being uncertain (see Greene, 2008). In particular, we estimated the likelihood of being uncertain relative to being certain with high aspirations. We only used young people with high ambitions as our reference or comparison group given previous research showing the importance of high ambitions for future outcomes. For educational aspirations, we compared young people who were uncertain in their educational plans to those who were hoping to continue in education. For career aspirations, we compared young people who were uncertain in their career plans to those who were hoping to have a professional or managerial career. Models were examined separately for males and females and separately for each cohort. Estimated parameters from the logit model were transformed using the exponential function to estimate the odds ratio. An odds ratio greater than 1 indicates that the factor is positively associated with the probability of being uncertain in aspirations whereas an odds ratio less than 1 indicates that the factor is negatively associated with the probability of being uncertain in aspirations (Wooldridge, 2002). For the outcome variable, we used logit models, as NEET is binary. Parameters were transformed into odds ratios for ease of interpretation. All our models included a measure of uncertainty as the main explanatory variable and all background factors as control variables. Models were examined separately for males and females.

## **Findings**

### **Gender Differences in Measures**

Table 7.1 presents the descriptive statistics for all of the variables used in the analysis. It has to be kept in mind that the sample only comprises those with high aspirations and those who are uncertain. There were significant gender differences in most of these variables. In both cohorts, males expressed more uncertainty in their educational aspirations than females and the more recent born cohort males expressed more uncertainty regarding their career aspirations than females. These findings suggest that males in general may be more susceptible to uncertainty in their aspirations than are females. Regarding demographic background variables, females in LSYPE were more likely than males to have parents who had professional or managerial occupations, but there was no difference in other occupations in LSYPE and no differences in BCS70. Females in LSYPE were also more likely to be non-white compared to males; but this was not the case for BCS70. As established in previous studies, males tend to have higher math scores than females, while females tend to have higher reading scores than males (Else-Quest, Hyde, & Linn, 2010; Hyde, 2007; Maccoby, 2000). In LSYPE parents with daughters reported higher educational expectations than parents with sons. In support of previous research (Bandura et al., 2001; Schoon et al., 2007), males had higher perceptions of their ability, whereas females showed higher levels of school motivation than males. For the outcomes, males were more likely to be NEET than females in LSYPE.

### **Background Characteristics of Uncertain Aspirations**

The background characteristics for being uncertain about educational aspirations relative to having high aspirations for continuing in education are shown in Table 7.2, and the background factors for being uncertain about career aspirations relative to having high aspirations for a professional or managerial career are shown in Table 7.3. Despite differences in assessment, there are similarities in both cohorts. For both cohorts and for men

and women, the findings highlight the importance of personal academic beliefs and motivation for certainty in young people's aspirations. Young people who believe that they can achieve and who are motivated to do so were less likely to be uncertain about their future goals than those who did not believe in their abilities and who were disengaged from school. Parents' expectations about their children's future were also important factors for certainty in aspirations, highlighting the importance of co-regulation with significant others. These results were significant even though prior ability was taken into account for both cohorts. Furthermore, higher math and reading scores were not consistently associated with less uncertainty. Higher math scores were significantly associated with lower levels of uncertainty in educational aspirations among females in BCS70 and with higher uncertainty regarding occupational aspirations among females in LSYPE, but were not associated with uncertainty among males in either sample. Therefore ability perceptions, expectations and motivation appear to be more consistent than actual ability in shaping certainty in young people's aspirations for their future educational and career development.

Demographic variables were also associated with uncertainty in aspirations, although not in a consistent manner. For uncertain educational aspirations, young people in both cohorts whose parents were from semi-skilled and unskilled occupations had a greater risk of uncertain educational aspirations than those whose parents were from professional occupations. In BCS70, young people whose parents had skilled occupations, relative to those whose parents worked in professional or managerial occupations, had a greater odds ratio of uncertain educational aspirations at age 16. In LSYPE, however, where educational aspirations were measured at age 14, this only applied for girls. For career aspirations, parental occupational status was only associated with career uncertainty of young people in BCS70, not in LSYPE. This finding might reflect a general trend towards higher career

aspirations in the more recent cohorts, regardless of parental occupational status (Schoon, 2010), or increasing career uncertainty, which cuts across all social classes (Blossfeld, 2005).

In terms of ethnicity, in LSYPE non-white cohort members were more certain regarding their educational aspirations than white cohort members, and in BCS70 non-white males were more certain than white males, although for girls we did not find the same association. This finding resonates with previous research indicating higher educational aspirations, higher levels of school motivation, and a positive academic self-concept among ethnic minority pupils in the LSYPE cohort, and the marginalization of white males regarding educational attainment (Strand, 2007). Regarding occupational aspirations however, we find that non-white females in LSYPE express greater uncertainty than white females, potentially indicating the need for occupational guidance especially for girls from ethnic minority backgrounds (also given the negative associations between perceived usefulness of career guidance and uncertainty among females in LSYPE).

>Table 7.2 Here<

>Table 7.3 Here<

### **Later Outcomes of Uncertain Aspirations**

As shown in Table 7.4, uncertainty in career aspirations was associated with a higher likelihood of NEET for males and females cohort members born in 1970. This result is consistent with the findings by Yates et al. (2010). We further find that young males in BCS70 who were uncertain about pursuing higher education were over 3 times more likely to spend time in NEET than male cohort members who had high, certain educational aspirations, while for females in BCS70 this association was not significant (perhaps because they were more likely to be teenage parents as pointed out by Bynner & Parsons, 2002). For

LSYPE there were no negative consequences of uncertain educational or career aspirations neither for males nor females.

>**Table 7.4 Here**<

There are a number of possible explanations of this finding. Firstly, there is the age difference when questions about career aspirations were asked in the 2 cohorts (age 16 in BCS70 and age 14 in LSYPE). At age 16, there may be more detrimental consequences for young people in BCS70 who are uncertain about their educational or career paths. At age 13/14, however, young people in LSYPE may not be facing any critical junctures in terms of their immediate decision-making, and they might have changed their aspirations as they came closer to school leaving age. Secondly, the differences in findings might reflect the different socio-historical context of the 2 age cohorts. Young men and women in BCS70 reached compulsory schooling at the height of a major economic recession, while in LSYPE they reached the same milestone just before the economic crisis of 2008, and hence might have had more training or employment opportunities after leaving school early. Furthermore, it could be that for the later-born cohort the process of career exploration has become more prolonged, especially given the generally extended education participation of young people.

## **Gender Differences**

Our findings reveal several gender differences. Firstly, males expressed more uncertainty in their educational aspirations than females in both cohorts and males expressed more uncertainty in their career aspirations than females in LSYPE. Furthermore, the negative consequences of educational and career uncertainty were worse for males than females in BCS70. These findings suggest that males in general may be more susceptible to uncertainty in their aspirations than are females.

While low perceptions of ability was a significant predictor of uncertainty for males and females in both cohorts, low levels of school motivation, which was associated with more uncertainty in educational aspirations among young people in BCS70, also appeared to matter for the educational certainty of males but not females in LSYPE. Despite mean-level differences, perceptions of ability appear to be equally important for certainty in aspirations for both males and females, while school motivation appears to be more significant for the educational aspirations of males, especially in the more recent born cohort. This finding suggests that compared to young males, young females today are more likely to be engaged and motivated in school regardless of their future educational plans. Nevertheless, school motivation was a significant factor for both males and females in both cohorts regarding certainty in their career aspirations.

In addition, there was also a gender-diverse pattern related to math and reading test scores. As established in previous studies, males generally had higher average math scores than females, while females generally had higher average reading scores than males (Else-Quest, Hyde, & Linn, 2010; Hyde, 2007; Maccoby, 2000). Interestingly, good reading ability was significantly associated with less uncertainty in educational aspirations for boys and girls in BCS70 and less uncertainty for boys in LSYPE. High math ability, on the other hand, was significantly associated with less uncertainty in educational aspirations but only amongst girls in BCS70. Similar findings were found regarding career aspirations: while good reading ability was significantly associated with less uncertainty for boys and girls in LSYPE, high math ability was associated with greater uncertainty for girls in LSYPE only. This may suggest that females who are high-achievers in math may have more uncertainty regarding which careers they should pursue which may have implications for STEM subjects. Although not entirely consistent across both cohorts and aspirations, math appears more significant for females, while reading appears to be more significant for males. This reversal suggests an

interesting twist to previous studies examining gender differences in math and English attainment, ability concepts, and their implications for career aspirations (Marsh Trautwein, Lüdtke, Köller, & Baumert, 2005; Marsh & Yeung, 1998; Moller, Pohlmann, Köller, & Marsh, 2009).

Career advice was also found to be associated with less uncertainty for females in LSYPE only. Females who perceived advice from teachers and Connexions as useful were less likely to report uncertainty in their career aspirations. Although not causal, this finding provides some reassurance that policies providing specialized career advice are useful for the career aspirations for females at least. On the other hand, the lack of significance for males in LSYPE and males and females in BCS70 potentially suggests the need for more appropriate guidance regarding educational and occupational opportunities for young people who do not intend to pursue an academic career. However, as this measure is based on the young person's perceptions of the usefulness of career advice, we cannot claim that either the presence or absence of career advice was (or was not) associated with certainty in their aspirations.

Interestingly, non-white females were more likely to be uncertain about their career aspirations than white females in LSYPE. In interpreting this finding, it has to be kept in mind that the sample for LSYPE has been oversampled for minority ethnic groups (33%). Although further analysis is needed to explore the differences in aspirations that have been found amongst minority ethnic groups in LSYPE (see [Strand, 2007](#), for example), our finding may reflect issues of stereotypic gender roles which hinder females of certain ethnic groups from striving for traditionally male-dominated work roles (see Gutman & Akerman, 2008), and potentially the need for specific career advice to overcome cultural and gendered stereotypes.

## **Limitations and Conclusions**

There are many strengths of our research, among which are the large-scale national representative datasets, their longitudinal nature and the possibility to measure uncertainty in aspirations as well as outcomes for young people. However, the limitations concern the fact that our measurements of uncertainty were not directly comparable between the 2 age cohorts, as they were collected at different ages and with different questions. In addition, BCS70 contains missing item responses, which in our case were dealt with mean imputation for continuous variables and additional dummy categories for categorical variables.

Another potential limitation is the use of only 1 group of young people as a comparison group, those with high, certain aspirations. To remedy this, we also examined differences in background factors and associated outcomes between young people who were uncertain and those who had low and certain aspirations, for example, not wanting to continue into higher education or aspiring to a semi-skilled or unskilled occupation. In general, we found that young people who were uncertain about their educational and career plans had higher school motivation than those young people who were certain about leaving education. Young males who were uncertain about their job aspirations had a higher likelihood of NEET compared with young males who aspired to skilled occupations. For the rest of the groups, both males and females, we did not find differences in their likelihood of NEET.

In conclusion, we find multiple and interlinked influences shaping uncertainty in aspirations among men and women. The findings suggest a vital role of socio-demographic background and individual resources, such as academic attainment, school motivation, and belief in one's own abilities that are required to make decisions about one's future career. Those lacking in these resources are more likely to be uncertain about their futures, and potentially more at risk of negative outcomes, compared to those young people who hold

certain aspirations. Males appear to be more susceptible to uncertainty than females. Furthermore, in the earlier born cohort, the subsequent consequences regarding the experience of NEET are worse for men than for females. Regarding NEET, we could confirm the link between uncertainty in aspirations and negative outcomes in BCS70 only. It might be that LSYPE is not yet old enough to feel the negative consequences, as the majority are staying on in education, doing A-levels or some similar course at a school or college, compared to just over half of the BCS70 cohort. The recent born cohort might also be exploring their options and possibilities, especially when considering the higher percentage who expressed uncertain career aspirations as compared to the later born cohort. Uncertainty about future career options has become more commonplace and therefore may even have beneficial consequences for certain adolescents (see Gutman & Schoon, 2012), although more evidence regarding longer-term outcomes is still required.

The evidence presented here calls for guidance especially for those young people who do not have the necessary resources for an academic career. Such guidance may wish to target males and females in different ways, given our findings. Females, for example, may benefit from increased support in math. Females may also profit from career mentorship and advice, especially those young women from some ethnic groups who may have less opportunities for career development and experience of guidance. Males, on the other hand, may benefit from encouraging school motivation and strengthening their reading ability. Future studies should also further examine the association and between math and reading and maybe other domains (see Chow & Salmela-Aro; Wang & Kenny, this volume), gender differences in how these abilities are valued, and variations in how they determine later outcomes and potentially act as protective resources for girls and boys, respectively.

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**Table 7.1.** Descriptive statistics for all variables in analysis

Description	Unit	LSYPE Males	LSYPE Females	BCS70 Males	BCS70 Females
		Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
<b>Main predictor variables</b>					
Uncertainty in educational aspirations	%	6.40 <sup>a</sup>	4.70	23.08 <sup>a</sup>	20.03
Uncertainty in career aspirations	%	22.40 <sup>a</sup>	18.60	8.29	7.34
<b>Control variables</b>					
Professional, managerial	%	41.80 <sup>a</sup>	43.70	38.42	36.64
Armed forces, skilled	%	33.30	32.00	47.36	48.47
Semi-skilled, unskilled	%	18.30	17.00	12.01	12.58
Unemployed, never worked	%	6.60	7.30	2.20	2.31
Ethnic background (non-White British or European)	%	31.90 <sup>a</sup>	34.00	4.43	4.67
Maths test scores at age 10/11 (standardised)	#	0.06 <sup>a</sup> (1.02)	0.03 (0.97)	0.30 <sup>a</sup> (0.87)	0.14 (0.81)
Reading test scores at age 10/11 (standardised)	#	-0.15 <sup>a</sup> (1.02)	0.17 (0.94)	0.22 (0.84)	0.25 (0.81)
Parental expectations	%	67.40 <sup>a</sup>	79.20	24.05	25.77
School motivation (standardised)	#	-0.05 <sup>a</sup> (1.00)	0.05 (.99)	-0.07 <sup>a</sup> (0.87)	0.15 (0.85)
Perceived ability (standardised)	#	0.11 <sup>a</sup> (0.97)	-0.11 (1.01)	0.12 <sup>a</sup> (0.74)	-0.08 (0.76)
Usefulness of information from career advice	#	3.44 (.73)	3.42 (.72)	2.56 (1.10)	2.43 (1.06)
<b>Outcome Variables</b>					
NEET	%	6.10 <sup>a</sup>	5.40	5.29	5.69

Note. (<sup>a</sup>) Significant gender differences in LSYPE using ANOVA test.

**Table 7.2.** Predicting uncertain educational aspirations. (Odds ratios contrasting uncertainty relative to aspiring to stay in education in LSYPE and BCS70)

VARIABLES	LSYPE		BCS70	
	Males Uncertain	Females Uncertain	Males Uncertain	Females Uncertain
Parental social background				
Skilled	1.074	1.605**	1.949**	1.933**
Semi and unskilled	1.323*	1.474*	2.785**	1.830**
Unemployed	1.010	1.746**	1.728	1.341
Ethnicity (non-White)	0.646**	0.657*	0.243**	0.957
Maths z-score @ 10	0.946	0.881	0.949	0.777*
Reading z-score @ 10	0.836*	0.838	0.665**	0.665**
High parental expectations	0.239**	0.208**	0.491**	0.408**
School motivation	0.606**	0.821	0.638**	0.712**
Perceived ability	0.709*	0.689*	0.652**	0.734**
Useful career advice	0.906	0.952	0.977	0.975
Pseudo R2	0.149	0.140	0.129	0.128
Observations	1766	1898	1111	1516

*Notes:* Estimated odds ratio using logit model. Reference category “stay in education post 16 for LSYPE” and “stay in education post 18 for BCS70”. Asterisks \* and \*\* indicate statistical significance at .05 and .01 level, respectively. Measurements of uncertainty in aspirations, math and reading scores at age 10 are different in the datasets.

**Table 7.3.** Predicting career aspirations (Odds ratio for uncertainty relative to aspiring for a professional or managerial job in LSYPE and BCS70)

VARIABLES	LSYPE		BCS70	
	Males Uncertain	Females Uncertain	Males Uncertain	Females Uncertain
Skilled	1.079	0.985	2.011**	1.994**
Semi and unskilled	1.109	0.933	3.376**	2.049**
Unemployed	1.281	1.101	1.168	2.278
Ethnicity (non-White)	1.072	1.399**	0.637	0.907
Maths z-score @ 10	1.023	1.200**	0.782	1.086
Reading z-score @ 10	0.877*	0.736**	0.890	0.862
High parental expectations	0.763**	0.593**	0.571*	0.761
School motivation	0.824**	0.805**	0.333**	0.527**
Perceived ability	0.751**	0.780**	0.533**	0.670**
Useful career advice	0.957	0.852**	0.849	0.868
Pseudo R2	0.065	0.077	0.273	0.134
Observations	1972	2007	764	1211

*Notes:* Estimated odds ratio using logit model. Reference category “professional or managerial occupation.” Asterisks \* and \*\* indicate statistical significance at .05 and .01 level, respectively. Measurements of uncertainty in aspirations, math and reading scores at age 10 are different in the datasets.

**Table 7.4.** Odds ratio [standard error] for association of uncertainty in aspirations and NEET status in LSYPE and BCS70

	LSYPE	BCS70
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Variables	Males	Females	Males	Females
Uncertain educational aspirations vs. certainty high aspirations	1.267	1.306	3.462*	1.063
Controls	Yes	Yes	Yes	Yes
Observations	1766	1898	939	1,366

Uncertain career aspirations vs. certainty high aspirations	1.140	.880	4.183**	2.540*
Controls	Yes	Yes	Yes	Yes
Observations	1972	2007	655	1,113

*Notes:* Estimated parameters using logit model. Models for uncertainty in educational aspirations and uncertainty in career aspirations estimated separately. Asterisks \* and \*\* indicate statistical significance at .05 and .01 level, respectively. Measurements of uncertainty in aspirations are different in the datasets.