# Youth in Transition: Longitudinal

# Comparisons of Youth Transitions in

# the UK using Cohort and Synthetic

# Cohort Data

## 1. THE DOCTORAL PROPOSAL

This doctoral project will make use of existing large-scale nationally representative longitudinal datasets in order to produce multivariate statistical analyses of youth transitions. The study of youth transitions has long been a central element within the sociology of youth (Clarke 1978). Though the temporal element- the transition - has slowly emerged as a major research paradigm (Elder 1994: 4). This has allowed social scientists to engage in areas of human agency, the relation between individuals and changing society, as well as linked and interdependent lives (ibid). Young people grow up in changing social and economic circumstances (Furlong and Cartmel 1997). Transitions from education to employment, along with housing and domestic transitions, traditionally were inter-related (Coles 2005). From what we know thus far, increasing numbers of young people remain in education for longer periods (Furlong and Cartmel 2007). Living away from the parental home, and cohabitation outside of marriage are increasingly common (Mulder 2009; Murphy 2000: 52; Holdsworth and Morgan 2005; Seltzer 2004: 926). Young People now marry later, are more likely to have a first birth later, and have fewer children than in previous generations (Ermisch and Francesconi 2000; Aassve et al 2005:283).

This document will first breakdown the doctoral proposal and its methodology. Secondly, a detailed literature review is established of youth in transition. Thirdly, a breakdown of the datasets used in this proposal is discussed – with emphasis placed on the construction of synthetic cohorts for the latter datasets. Fourthly, discussions of each theme that the doctoral proposal seeks to address is established. Finally, there will be a discussion of missing data and how that will be addressed.

There is a large gap in the youth data portfolio between 1970 and the commencement of the Millennium Cohort Study (2002-2) (Gayle 2005). This project addresses this data related challenge. It will use data from the British Household Panel Survey (1991-2009) and Understanding Society(the UK Household Longitudinal Study) (2009-) to construct synthetic cohorts of youth data. Data from the older birth cohorts and data from these synthetic cohorts will be used to study the youth transitions in a historical as well as life course context.

This doctoral project will focus on school-to-work transitions producing analyses of the various constituent parts that make up the youth transition whole: school level educational attainment, destinations after the mandatory school leaving age, and job market stability. By focusing particularly upon school-to-work transitions, detailed analysis into the historical and comparative contexts that make up the transition from education to the world of work will be undertaken. The doctoral project’s literature review will focus on themes of: educational attainment, risk and stability, NEET status, non-traditional education and subsequent outcomes. After completion of the literature review, the subsequent themes of analysis will be refined and narrowed down to fit not only into the scope of a PhD timeframe, but also to fit into the existing state of the literature at hand.

## 2. Research Questions

The proposed doctoral project aims to:

1. Use exiting large-scale social survey data resources to develop new youth data resources;
2. The work will seek to understand historical changes in youth transitions through comparative cohort analyses and through detailed empirical analyses documenting the patterns and trends in youth transitions during the closing decades of the twentieth century and the opening decades of the twenty- first century;
3. Provide a detailed empirical understanding of youth transitions that is theoretically informed by the conception of a lifecourse perspective, and contribute to the wider understanding of the social processes that underpin social reproduction and the transmission of social inequalities;
4. Provide an evidence base that will inform the development of policy, especially in the fields of education and employment.

Such aims focus the doctoral project on the understanding of historical changes in young people’s lives through youth transitions. The project will thus focus on the following research questions:

1. What are the patterns of social inequality in youth transitions (e.g. within cohorts)?
2. How have patterns and trends in youth transitions changed over time (i.e. between cohorts)?
3. How have the social processes that underpin youth transitions changed over time?
4. How can youth transitions be more comprehensively understood within a lifecourse perspective?

The project itself will seek to focus on three primary questions of interest – which fit into the wider research questions outlined above, these are:

1. What implications does social class hold on educational attainment?
2. How has the raising of the mandatory school leaving age impacted the destinations of youth?
3. How stable are the labour market trajectories of youth in transition?

RQ1-3 operate based on a temporal progression throughout youth transitions; starting with attainment at school, moving onto how that impacts where youth end up after mandatory schooling has finished, and finally ending with an analysis looking at the relative stability or instability of youth in their first job (are their periods of unemployment? Do they move on rather quickly? Or do they stay there for a long period of time? Etc).

With the three broad areas of research now established, the literature review that follows will be split up into four constitutive parts: a general overview of key parts of the literature that embed themselves throughout the research, a focus on educational attainment, a focus on destinations, and finally a focus on first jobs.

## 3. LITERATURE REVIEW - OVERVIEW

Life Course:

The life course approach - contrasted with the temporally static approach to social phenomena -has established itself as a substantively significant research paradigm within the last few decades (Elder 1994: 4). The term ‘life course’ whilst at first appearing to be an abstract and rather nebulous concept is in fact a concrete multilevel phenomenon that is defined via the social trajectories of individuals through structured pathways of given institutions that ultimately form the developmental experience of a given individual (Elder 1994: 5). These ‘structured pathways’ are interwoven with what Elder argued were ‘age-graded trajectories’ (1994: 5). These trajectories took the form of work, family, and housing transitions. Such transitions are always historically and temporally located, thus given them specific and distinctive form and meaning (ibid). The structured pathways that are interwoven within the life course support an analysis that focuses upon inequalities in relation to race, class, gender, and other structural aspects of social life (Bernardi et al, 2019, p.1). The definition that Elder gives of the principle of agency: ‘’ individuals construct their own life course through the choices and actions they take within the opportunities and constraints of history and social circumstances’’ (Elder et al 2003) also known as ‘’bounded agency’’ (Evans 2007) is a concept that argues that agency of the individual is situational, and bounded to the circumstances of place and time (Bernardi et al 2019, p.3).

By focusing upon a life course perspective (in particular the moment in the life course that experiences youth transitions), analysis can extend beyond static moments in time. This allows research to be expanded both in reference to within individual and between individual analysis. A life course approach appreciates the fact that structured pathways are temporally grounded and as such acknowledge that any youth transitions and trajectories must be understood within that embedded temporal context. The life course perspective lends itself to a study of youth transitions due to its focus upon the interdependence between life domains (Bernardi et al, 2019, p.3). This means that outcomes within one domain (say school) are interrelated with the outcomes and behaviours of other domains (say work). Finally, a life course perspective allows for insightful comparison across cohorts to study how such cohorts have responded differently to the consequences of their early transitions (Elder 1994:5).

Within the given time frame of this PhD research – studying youth transitions over an extended period of time (1960s onwards) - the rapidly changing nature of mid-20th century Britain is one that has the potential to be one of the longest detailed analyses of school-to-work transitions of its kind and offer significant differences in birth cohort exposure to different historical worlds (Elder 1994: 5). By integrating a life course perspective with the methodology of birth cohorts this PhD research is actively, exploring the age-graded patterns embedded in cultures, institutions, and social structures enabling a comparison across over 50 years of British society.

Transitions:

The changing nature of identity formation and the overall life process has led some scholars to argue that the very notion of ‘transition’ ought to be further problematised. No longer are individuals placed on a rigid ‘train-track’ with specific diversions (Bynner 1998: 31). Instead, some scholars advocate for the term ‘navigation’ over that of ‘transition’ (Evans and Heinz 1994) as this integrates the more fluid aspects of an individual’s life chances and choices within a cascadingly complex labour market (Bynner 1998: 31). Indeed prior to the 2007/8 recession there is evidence that transitions were becoming longer, more complex, and conditional (Keep 2012, p.5).

I follow the work of Furlong (2010: 517) in their assessment (and agreement) of Brook’s (2009) work on the validity of ‘transitions’ in late modernity. Transitions are still critical in our understanding of key life events - like education, and entry into labour markets - they thus form a fundamental part in our understanding of social reproduction (Furlong and Cartmel 2007). To address the ‘navigations-transitions’ debate, whilst transitions have indeed become ‘’protracted, have increased incomplexity and of have more routes events sequences changed’’ (Furlong and Cartmel 1997:3), the outcomes of these complex routes of social reproduction have largely remained highly structured (Roberts et al 1987; Bynner and Roberts 1991). Reiterating the stance of Furlong and Cartmel once more, whilst there have been radical changes within the social reproduction of individuals the underlying result has for many remained the same (Furlong and Cartmel 1997: 3). The important thing to note here is that whilst there may have been an explosion of choice and diversity in possible routes taken in late modernity, the increasing levels of risk associated with such fluidity have prompted new sources of vulnerability that need to be addressed. This doctoral project thus maintains that the term ‘transition’ is an appropriate term that integrates the key structural elements of its processes.

Beck and Giddens (1994) argue that the increasing levels of complexity within the roles of social reproduction must be engaged in a critical manner to explore how individuals in particular have to engage in processes of ‘reflexive modernisation’ (Beck and Giddens 1994: 5) to constantly confront oneself with the effects of risks. This emphasis on risk and uncertainty whilst breaking with tradition (Furlong and Cartmel 1997: 15) is one that neatly fits into a model of increasingly complicated processes of social reproduction and should be integrated into a full comparison of birth cohorts.

Structuration and Individualisation:

Two key theories in the study of youth transition. The former argues that structural factors like social class, gender, ethnicity, and so on, still play an important role and are indeed determinants for the individual who is pursuing the ‘imperative of living a life of one’s own’ (Beck and Beck-Gernsheim 2002). The latter argues that in place of these ‘collective guides’ (Gayle et al 2009, p.4) individualised identities that have greater scope beyond the mere structures (Murray 2011: 26) they inhabit are able to create complex and subjective lifestyles that deviate from the much more rigid structures detailed above (Gayle et al 2009, p.5).

If the individualisation thesis were to be correct it would demonstrate itself empirically and repeatably. However, as Gayle et al (2009) found alongside a great many others (Insert individualisation thesis critiques here) the thesis’ strong claim against structures is not to be born out within the data. Pathways toward transition may have certainly altered, and even in some cases become more complex, but that does not mean there is support for ‘detraditionalisation’ (Gayle et al 2009). There has always been an element of navigation and choice within youth transitions, though in the past the range of choice may have been narrower thus owing to a more homogenised pathway for those in past contexts (Goodwin and O’Connor 2005, p.4). Simply put, an increase in the complexity from getting from A to B does not in any way necessitate the declining importance of structural factors upon an individual’s negotiation of that journey. In other words, individualisation fails to account for the still apparently strong influence of structural elements on a person, whilst structuration appears to not appreciate the increasing levels of complexity that are placed upon such persons. In this then, it is best to call for a structured individualism thesis (Roberts et al 1984) – one that recognises in a risk society, that whilst pathways are different, and even go so far as to state numerous, whilst young people believe that their choices are more individualised, they are as empirical data (Roberts 2003, p.484**)** demonstrates still heavily influenced by the structures of society (Gayle et al 2009, p.26). Overall, the literature stresses the relevance of contextual factors that also highlights the important of individual agency (Steiner et al 2021: 8)

Late Modernity: Risk and Uncertainty

The time period of this doctoral project provides adequate space to explore and analyse what Giddens termed ‘Late Modernity’ (Giddens 1991; Beck et al 1994). In the past more concrete certainties exemplified in the earlier part of the 20th century have given way to a more fluid and dynamic notion of adult identity and its development (Bynner 1998: 31). These past certainties gave rise to stability; this current dynamicism gives rise to risk. (Beck 2014). This late modernity is characterised primarily by drastic social and economic transitions that enhance the overall uncertainty of adolescents within their occupational positions (Blustein 1997: 6). There is however debate over just how fluid certainty and choice has become, Gayle et al (2009) for example provide a more updated version of events that appears to review the late modernity outlook.

How individuals deal with risk and uncertainty is key to understanding the choices that they inevitably have to make (or are pushed to make). A key theory that is engaged with a great deal within educational sociology is a theory of rational action, in transition literature a sub-division of rational action is relative risk aversion theory (Holm and Jaeger 2008: 199). The theory of relative risk aversion (RRA) suggests that educational decision making is primarily motivated by an individual’s desire to be upwardly socially mobile but primarily to avoid downward social mobility (Holm and Jaeger 2008: 199; Van de Werfhorst and Andersen 2005: 321). The theory that individuals of the same cognitive ability but different social class backgrounds gain differing levels of utility from the same educational choice (Holm and Jaeger 2008: 201) offers an explanation on the role of secondary effects (the persistence of social class on education over and above its influence upon cognitive ability).

History

The focus of this doctoral project will cover the latter half of the 20th century. This latter half encapsulates in Brown’s (2006) terms both the second and third wave of education in Britain. The second characterised by the increased provision of education to all and the dissolution of the ‘’feudal dogma of social predestination’’ (Brown 2006, p.65). The third wave is characterised by the move toward a system of education that sees the education a child receives conforming to the wealth of the parents rather than the child’s ability (ibid).

The expansion of education and compusloary schooling was first increased in 1947 via the 1944 Education Act from 14 to 15 years old. It was raised again to 16 years in 1973 (Connelly et al 2016: 2) – the latter of these two covers the first part of the time period this doctoral project seeks to study. Another important aspect of Educational history relevant to the period of proposed study in this PhD is the moving away of the tripartite school system of comprehensive, modern, and grammar schools (Connelly et al 2016: 3).

As stated, a key focus of this research will focus upon educational attainment at the age of mandatory schooling. The qualifications undertaken by people in the latter half of the 20th century have changed and transformed from the introduction of the General Certificate of Education Ordinary Level (or O-level) in the 1950s, to the Certificate of Secondary Education (or CSE) in the 1960s and finally both were replaced by the General Certificate of Secondary Education (or GCSE) in the late 1980s (ibid).

In a system that promotes differing levels education to those with different socio-economic backgrounds reifies a primarily differentiating function – that is to maintain the current levels of strata (Brown 2006, p.67). Indeed, in the past education was largely provided to the working masses as a means to instruct them in fulfilling their future roles in a changing society (Brown 2006, p.68), the extent to which this has changed is debatable.

Nevertheless, important access to education and its expansion as a system has yielded drastic changes to those of the working classes, for women also. Over the course of the so called ‘second wave’ gender inequalities have declined in terms of educational attainment (Brown 2006,p.1). Whilst class will remain a focal point of this doctoral proposal it would be hard pressed to ignore the role of gender within education and the impact that has had upon school-to-work transitions over the 20th century. Indeed, the shift from discussing girls and education to (primarily white working class) boys in education is in of itself a sociologically interesting phenomenon.

Changing Times

There is a broad consensus amongst sociologists that during the close of the twentieth century a process of radical transformation has affected the ‘traditional’ processes of transition (Gayle et al 2009). This ‘Changing times consensus’ argues that a series of complex social and economic changes has prompted this transformation. This lends credence to the choice of datasets this doctoral project will be working on, the National Child Development Study explores just before and the early phases of this transformation, the British Cohort Study spans the midpoint, and the British Household Panel Survey and Understanding Society both explore the aftereffects of these changes.

The collapse of the youth labour market in the early 1980s, the education reform act 1988, the establishment of the Youth Training Scheme and modern apprenticeships etc (Gayle et al 2009) all provide historical context to such social and economic changes.

Labour Market

Young people entering the labour markets for the first time no longer share common transition experiences with their peers (Goodwin and O’Connor, 2005: 1). Changes within the transition processes are normally cited via labour market transformations, changes in youth unemployment, the emergence of government schemes such as the youth training schemes (Goodwin and O’Connor, 2005: 2; Winterton and Irwin 2012: 859).

The earlier transitions of the 1950s and 1960s have in comparison to contemporary transitions been described by Vickerstaff (2001) as ‘single step’ transitions. A single step transition from school to the world of work was made possible due to the argued buoyancy of the labour market at that time (Goodwin and O’Connor, 2005: 14). The fact that following the second world war the vast majority of young people in the UK left education as soon as possible (Gayle et al 2009: 1) meant that so long as the labour market could support such transitions then young people would be certain to find work in a ‘single step’ fashion. The virtual collapse of the youth labour market in the early 1980s (Gayle et al 2009: 2) changed the nature of the labour market, and thus changed the nature of the ‘single step’ transition. Indeed, support for this claim can be found in Lindley (1996: 24), whereby the high youth unemployment and underemployment in the 1980s is attributed less to school preparation and more on economic factors such as the labour market and the economic environment.

The 1990s whilst experiencing economic recession, had less of a catastrophic effect upon the youth labour market than what was experienced in the 1980s (Lindley 2006: 29), given that in 1988 the Education Reform Act is oft held as one of the most important pieces of post-war education legislation (Gayle et al 2009: 2), the structural and economic conditions that transformed and heavily impacted the 1980s environment were softened somewhat in the 1990s. Arguably new strains are now placed upon the labour market post 1988 due to the elongated of mandatory schooling and the school-to-work transitions (Lindley 2006: 43), these new strains will be reflected upon and compared to past decades of youth transitions within the doctoral thesis. Important to point out however, is that whilst the labour market has indeed differentiated and faced major transformations, empirical evidence suggests that at least between the period of the 1970s to 1990s, there has been a considerable level of continuity in the pathways in which young people enter the labour market ( Schoon et al 2001: 4), though as stated earlier the later born cohorts of this time frame do experience more fluid transitions than their predecessors – unemployment being the most obvious side effect of this fluidity (ibid).

It has been suggested that young people’s decision to remain in education rather than entering the labour market straight after mandatory schooling is completed can be accounted for by the types of opportunities within local labour markets (Biggart and Furlong 1996: 253). This is somewhat supported by Rafe and Willms (1989) identification of the ‘discouraged worker’ – where labour markets see above average rates of unemployment it discourages young people from leaving school at the minimum age (Biggart and Furlong 1996: 254).

Given the time frame of the late 1980s to 1990s one of the most dramatic changes in the labour market is the decline of the manual labour market and heavy industries of which labour was supplied almost entirely by the working classes. Thus, once again there is a primary focus on social class – in this case particularly the working class. Due to these labour market changes, the 1990s in particular demonstrated a need for the working classes to adapt to education, and labour in differing ways (Biggart and Furlong 1996: 256) as the verification of ‘working class identity’ through ‘factory floor cultures’ was no more (Biggart and Furlong 1996: 257). Overall, the labour market has transformed dramatically – a once sizeable market for unskilled labour has shrunk to an estimated half a million unskilled jobs (Goodman and Burton 2012: 505). Not only will this dramatic change have had impacts upon people’s choices post-mandatory schooling, but also it will have affected unemployment, first jobs and employment, as well as stability within the markets individuals have chosen to enter – all aspects worthy of analysis.

Economic Scarring due to NEET status and unemployment

During the past higher education and in particular training prior to entering the work force provided a near certain chance of employment after successful completion of such schemes. In comparison to more contemporary generations, there is a larger association with repeated experiences of unemployment (Schoon et al 2001: 8). This has formed part of the explanation as to why individuals choose to stay in education to acquire credentials – as a substitute for unemployment (Cregan 2001: 126).

Participation during mandatory schooling years can also have an effect on NEET status post-mandatory education. School exclusion for example increases the risk of becoming NEET at age 19/20, remaining economically inactive at 25/26, and experiencing higher unemployment risks (Madia et al 2022).

The changing nature of the youth labour market has had pronounced effects upon unemployment, non-employment, and NEET status for those young individuals leaving schooling and entering the world of work for the first time. Since 1986 the non-employment rate of 16-25 year olds hasn’t been lower than 15.1 per cent (in 2008 – in 1986 it was 19 per cent) and in 2010 it reached 20.5 per cent (Duckworth and Schoon 2012: 39). Non-employment Is not a temporally static disadvantage for an individual, there is a significant wage penalty even after controlling for other factors such as education, there is a large wage gap at 23 for those individuals that have experienced 5+ months of unemployment compared to those with none or little youth unemployment (Gregg and Tominey 2005: 494) – even 20 years later a wage scar of around 9-11 per cent persists (Gregg and Tominey 2005: 506).

There is a gendered aspect to the non-employment rate – at least since the 1980s. Whilst the non-employment rate for men has risen slightly since the 1980s (Jones et al 2003: 293) the non-employment rate for women has decreased since this time period to such a degree that it has actually increased the overall total share in employment for women (Jones et al 2003: 296).

When speaking to NEET status in particular, once more the literature suggests a socio-economic gradient to this concept. Those from the most precarious socioeconomic backgrounds are more likely to end up in prolonged NEET status, and those that stay in education and thus gained resources to avoid such a status come from traditionally advantaged backgrounds (Duckworth and Schoon 2012: 47).

Wage scaring has already been mentioned in conjunction to periods of non-employment but Ralston et al (2016: 203) provide evidence for an occupational scarring effect for those that attain NEET status. NEET status has negative effects on the occupational positions of individuals over the life course. Indeed Ralston et al (2016: 204) suggest that NEET status actually has a widening level of negative consequences over that life course, in other words NEET status prompts an incremental disadvantage.

Educational Attainment:

Educational attainment and qualifications are a strong determinant of later life chances; income, occupation, and opportunities (Goodman et al 2011: 1). For this reason, the study of educational attainment forms a key aspect of youth transitions and as demonstrated by Goodman et al (2011), impacts life chances. The following section seeks to expand upon the literature of educational attainment.

The literature on educational attainment focuses primarily upon a social class dimension of a ‘wastage of talent’ for those from working class backgrounds not being able to fulfil their full potential due to their given social class even when controlling for cognitive ability (Bukodi et al 2014: 34). Just as the literature suggests that the socio-economic gap in higher educational attainment is considerably explained by previous attainment at 16 (Croll and Attwood 2013: 187), the same is true for attainment at 11 explaining attainment at 16 (Chowdry et al 2010: 59). Considering that large social class divisions in cognitive ability can be observed when children are still at primary school (Connelly and Gayle 2019: 1) and ‘bottom sets’ in English classrooms are dominated by working class children compared to ‘upper sets’ dominated by the middle class (Goodman and Burton 2012: 502) this pattern of attainment affecting attainment is not surprising. These social class divisions persist at all levels of educational attainment – whilst 62 per cent of students in Erikson et al’s (2005: 9731) study continue to A-level work, only 40 per cent of working-class students do so compared with 77 per cent of those from a salariat background (ibid).

Contemporary evidence suggests that both social class and ethnicity exert a far greater influence on GCSE performance than gender does (Connolly 2006: 3; Sullivan et al 2011: 234). To expand on this, whilst empirical research has found consistent levels of statistical significance of the impact that gender has upon educational attainment the substantive significance is normally fairly small (Connolly 2006: 14), especially in comparison to the substantive effects of social class and ethnicity. Indeed, focusing upon ethnicity in particular, there are significant differences in attainment when comparing ethnic minorities and white British children even after for controlling for social class (Sutherland et al 2015: 9), the Joseph Rowntree Foundation for example has found that white British students make up more than three-quarters of low achievers and do worse than children from similar economic backgrounds that happen to be ethnic minorities (Stones 2016: 173).

The majority of literature surrounding educational attainment uses GCSE attainment data – whilst GCSE results are not a formal basis for offers of higher education places, they have been proven to be an important predictor of further attainment and inform the higher education process (Croll and Attwood 2013: 196).

Another important element in educational attainment goes beyond the individual and focuses upon the impact of the school. Noden and West (2009) have stated that attending a ‘deprived’ school can impair educational attainment. A comparison of the least deprived 10 per cent and most deprived 10 per cent of schools find that high achieving children performed better at GCSE at the former compared to the latter by half a grade (Goodman and Burton 2012: 510). The concept of ‘deprived’ schools is made worse by allocation of places of pupils into schools. There exists a ‘clustering of poverty’ within particular schools (Gorard and Siddiqui 2019: 2). This segregation by social class is harmful to students and promotes worse opportunities for the most disadvantaged and has a knock-on effect of lowered aspirations and lower participation rates in later education (Gorard and Siddiqui 2019: 2; Hamnet et al 2007: 1278). In this, the literature agrees that solely focusing upon the social background will not appropriately explain matters of educational attainment – school compositional effects have a considerable impact on school performance (Hamnet et al 2007: 1255). Whilst individual level factors such as parental socioeconomic position (Playford and Gayle 2016: 22) and aspirations are important in understanding school GCSE attainment, school compositional factors also need to be considered.

The UK Higher Education system has expanded from student numbers of 400,000 in the 1960s to 2,000,000 in the year 2000 (Blanden and Machin 2004: 1). This expansion has not been equally distributed across social classes and attainment at higher education institutions has a socioeconomic gradient – though this is more pronounced in contemporary cohorts compared to those in the 1960s (Blanden and Machin 2004: 2).

Gender and Education:

Whilst social class has been the primary focus of both the literature and the proposed research thus far, gender has repeatedly appeared also. This following section seeks to collate the overarching literature in the topic of gender and education as it relates to youth transition.

It is of no surprise that women have historically been under-represented in Higher-Education, though in 1992 the participation rates in England had caught up with those of men (Broecke and Hamed 2008: 1). Whilst in a contemporary context, girls are more likely to be entered for A-levels, pass them, and do better than boys this has not always been the case (ibid). The historical early transitions to domestic work that women faced set these individuals onto trajectories with little to no educational qualifications or vocational training which set them onto paths of lower socioeconomic attainment and a reliance upon marriage (Xue et al 2020: 1).

Aspirations:

The literature states that those students with high aspirations and expectations have higher school achievement than those with low aspirations and expectations (Khattab 2015: 731; Baker et al 2014: 527). However, this is not the full picture, those from working class backgrounds may hold higher aspirations than what the labour market can support (St Clair et al 2013). Those children that have parents with higher aspirations for their children will typically have better outcomes (Gutman et al 2008: 6). Ontop of this, girls in comparison to boys, and ethnic minorities in comparison to white individuals will typically have higher aspirations (Gutman et al 2008).

Aspirations, and especially raising such aspirations cannot be the only aspect of education to look at when reflecting on how to enhance educational attainment and mobility. Indeed, this goes against the view of the 2010 White Paper on the importance of teaching that states ‘in far too many communities there is a deeply embedded culture of low aspiration that is strongly tied to long-term unemployment’ (Baker et al 2014: 526). However, aspirations are important to take into account when examining school performance and educational attainment (Khattab 2015: 745), though the causal ordering is not concretely defined (Berrington et al 2016: 731), aspirations can be a predictor of educational achievement or an outcome of it (Baker et al 2014: 527).

Traditional social theory in this area is dominated by Bourdieu’s assessment that ‘the laws of the academic market-place determine aspirations by determining the extent to which they can be satisfied’ (Baker et al 2014: 528). The notion that there is a strong connection between aspirations and social background is embedded in a Bourdiusian analysis of education. Rational choice inspired theories (like RRA theory) instead argue that aspirations are tied to rational assessments of current circumstances, whilst this does have some support (Biggart and Furlong 1996: 253; Rafe and Willms 1989), there is data to suggest that aspirations regularly run ahead of the chances of them being realised (St Clair et al 2013; Baker et al 2014: 528; MacLeod 2018).

Destinations after Mandatory Schooling:

There are four main pathways that an individual may transition into after mandatory schooling is complete: they may continue their education in a traditional context, moving on into higher education, they may continue their education in a vocational context, they may go straight into employment and the world of work, or they may have a period of unemployment or NEET status (not in education or employed). The following section will reflect on literature within each of these pathway destinations.

Anders (2017: 381) has identified that a greater proportion of English 14-year olds expected to apply to university than ultimately make that decision to apply by age 21 – there is a continuing ‘falling off’ from age 14 onwards. University attendance has a large socioeconomic gradient (ibid), some of this gap is explained by prior educational attainment (Chowdry et al 2013), though a socio-economic gradient remains which is argued to have existed far before attendance at higher education institutions (Chowdry et al 2013: 454).

The intention to stay on within higher education is an intention that is rather stable comparative to decisions to leave education (Croll 2009: 400). That intention to stay on also has a socio-economic component to it; girls and those from more privileged socio-economic backgrounds are more likely to attain better grades and thus more likely to stay on within higher education after mandatory schooling (Croll 2009). Even in a contemporary context, children from all socioeconomic backgrounds are more likely to stay on within higher education compared to the past but those from poorer backgrounds are still entering higher education as a less rapid rate compared to those from more well-off backgrounds (Galindo-Rueda et al 2004: 3)

A key theme of the research thus far is that the destination of higher education is one that is impacted heavily prior to university attendance. Indeed, the research indicates that the impact from social class in particular is evident throughout a child’s life – research has particularly focused upon prior educational attainment (Croll 2009**;** Chowdry et al 2013; Anders 2017; Winterton and Irwin 2012).

To give a temporal aspect to this discussion that is relevant to the current doctoral research, Payne states that between the late 1980s and mid 1990s they concur with similar findings that rates in full-time education grew rapidly (Payne et al 2001: 8). Not only that, but during this timeframe the growth in higher education rates was matched by falls in the proportion of young people who went into full time jobs (ibid).

Given the explosion of university attendance in the 1980s and 1990s it is important to distinguish this from the past. By 1948 for example the proportion of 18-year-olds entering higher education was only 3.7 per cent of the population (Reay et al 2001: 5), indeed the social class differences were very pronounced at the start of the 20th century, during the period of 1928 to 1947 8.9 per cent of boys from non-manual backgrounds attended university in comparison to 1.4 per cent of boys from manual ones (Glass 1954). Whilst there has been a massive increase in university attendance in general, as well as within a social class dimension, as previous research suggests, a class dimension remains. This doctoral proposal thus agrees with Reay et al’s (2001: 20) assessment that ‘the history of education in Britain if one overshadowed by class inequalities).

Vocational training is not to be overlooked. Whilst the past is oft seen as engaging in smooth ‘single step’ (Vickerstaff 2003) transitions, the apprenticeship model of transitions from school-to-work were substantively significant at the time – Vickerstaff (2003: 269) indicates that around 35 per cent of the male school-leaving age cohort during the ‘golden age’ (ibid) entered into apprenticeship like schemes. Not only do apprenticeship schemes present a different form of transition from higher education, they also present a prolonged transition in their own sense – increased levels of training prolong that initial step into a first job/career. Comparing the two, the wage premimum gained from staying in education and gaining academic qualifications is typically higher than that gained from vocational qualifications, though this gap is reduced when the length of time taken to aquire these qualifications is taken into effect (Dearden et al 2002: 249).

## 4. BREAKDOWN OF THE DATASETS

This doctoral project seeks to utilise the National Child Development Study (University of London 2020a; 2020b), the British Cohort Study (Bynner 2021; University of London 2021), and the British Household Panel Survey and Understanding Society (University of Essex 2022) to accomplish its aims of researching youth in transition within a UK context.

The British Cohort Study (1970) began when the children of the National Child Development Study (1958) were entering secondary school and moving into the youth phase. The BCS collects data on a ‘younger generation’ and is therefore a suitable data source for comparative analysis with the NCDS. The Millennium Cohort Study (MCS) began in 2000-02 and the most recent sweep of data was collected when the MCS members were age 17. Participants in the MCS are currently too young for comprehensive analyses of their transitions. The MCS is not suitable for this study which seeks to locate youth transitions within a lifecourse perspective.

The absence of data on youth transitions from the 1990s onwards presents a major data obstacle. This project will overcome this obstacle by using data on young people collected within the British Household Panel Survey (1991-2009) and Understanding Society (2009 -). The British Household Panel Survey and Understanding Society include both prospectively and retrospectively collected measures, both of which will be utilized to construct synthetic cohorts of youth data that substitute the missing birth cohorts. The participants in the BHPS are also subsumed into Understanding Society which therefore provides a series of data that extends further into the adult phase of the lifecourse.

Each of these datasets has a breadth of information on a range of topics not relevant to the purposes of this research. Unfortunately, particularly in relation to the older two datasets, a clear and concise codebook is not available. Each dataset comes with what are termed ‘data dictionary’s’ that provide information on the variables, labels, and position within the dataset (among other things). Also made available are the original scanned pdf documents of the questionnaires used for the sweeps required for analysis. Combining these two important documents and for the sake open science practices (clarity above all else) I have constructed my own codebooks of each of the dataset sweeps intended to be used for analysis within the doctoral project. The purpose of this is to produce a uniform codebook style for all datasets being used in the project and to combine some essential elements of the documents provided into one cohesive whole. In particular the matching of variables to their full questions asked within the questionnaire. This enables an easier recognition of the utility of certain variables. The aim of this research is to make comparisons over time using different datasets. A key challenge in this comparison will be finding comparable variables to use over time – the production of data dictionary codebooks is to aid in that variable selection. What would be an attraction variable in one dataset may not exist in another, making the whole point of a comparable exercise rather pointless.

On extensive inspection and cross-referencing between data dictionaries and pdf questionnaires number of inconsistencies (particularly amongst the older datasets) has been found. Common clerical errors have been found in the data dictionaries - variables misnamed, type of data mislabelled etc. This could have potentially impacted variable selection and further analysis had these inconsistencies not been identified and rectified in my own codebooks.

National Child Development Study

The National Child Development Study (NCDS) was the second major nationally representative birth cohort study in the UK. It followed 17,000 participants all born within the same week in 1958 (Power and Elliot 2006: 34). For the purpose of this doctoral project the sweeps up to age 23 are selected for intended use. The NCDS coming off the back of the first birth cohort (and its first few sweeps) mainly focused upon health-related outcomes- though as the children grew older, and eventually into adults more and more data was collected on other outcomes which are inclusive to the aims of this doctoral project- primarily educational and occupational outcomes.

Post-hoc the NCDS has been harmonised on many fronts with the British Cohort Study - the third major birth cohort study in the UK - particularly along socio-economic class harmonisation. This harmonisation has allowed for comparisons between datasets to be made easier by harmonising the occupational codes of the NCDS and BCS datasets.

The overarching theme of this doctoral project will be locating key youth transitions in the more comprehensive context of the lifecourse (Elder 1994). The work will seek to understand historical changes in the youth transitions through detailed comparative cohort analyses. The older birth cohort studies chosen for analysis, i.e. the National Child Development Study (1958) and the British Cohort Study (1970) support comparative analyses precisely because of such work leading to social class harmonisation. Primarily the datasets chosen to answer the research questions stated above will be required to have a certain level of data on educational attainment, the extensive nature of the NCDS allows for a great variety of variables on this matter (Dearden et al 2002: 262), in particular the cohort surveyed at age 23 offers a full post-mandatory school history (Blanden and Machin 2004: 9).

A primary reason for using the NCDS as the first dataset for the intended PhD research is that the school leaving age was reasied to 16 years old in 1973 (Power and Elliott 2006: 34), making the cohort members of the NCDS part of the first year group to stay in school for this period of time and makes school leaving age a constant across all three proposed datasets.

The sample size at age 23 is significantly smaller than that of the initial sample, this sample attrition is primiarly determined to be caused by not being able to trace participants (there is also a relatively low refusal rate – 7.1 per cent at age 23) (Power and Elliott 2006: 35). An issue that comes with sample attrition for the NCDS is that the size of certain ethnic minority populations back when the sample was first collected were small, meaning that attrition makes analysis of ethnic minority populations extremely difficult (ibid) – with this in mind it is more appropriate to use ethnic minority status as a dummy control for those models that deem its inclusion theoretically justifiable instead of seeking to use ethnic minority status as an independent variable in its own right. The nature of the level of missing data in the NCDS suggests that there is no support for the position that the data is missing completely at random (Hawkes and Plewis 2006: 489; Silverwood et al 2021: 3).

British Cohort Study

As mentioned, the British Cohort Study (BCS) was the third major nationally representative cohort study within the UK. Starting in 1970 it followed 17,000 participants born within the same week (Elliott and Shepard 2006: 837). The cohort had repeated contact with participants from 1970 to 2021. To this doctoral project the 16, 26, and 30 sweeps are selected for intended use (though earlier sweeps may be used for explanatory variable selection). A full and detailed educational background history was taken for participants at age 30 in the BCS which is the rationalisation for including it within the analysis. The sample at age 26 and after, faces significant sample attrition and is primarily attributed to individuals moving and not being able to be traced (ibid).

The BCS unlike the NCDS was not primarily created with health outcomes in mind and so has a breadth of information on a range of social, economic, political, and educational matters in relation to the individual.

In contrast to the NCDS the BCS does not collect full details on employment and post-mandatory schooling for its sample until they reach age 30 – there is a survey conducted at age 26 but it is somewhat unsatisfactory for any rigour level of education or employment analysis (Blanden and Machin 2004: 9).

British Household Panel Survey and Understanding Society

The British Household Panel Survey (BHPS) and Understanding Society (UKHLS) were two datasets, the BHPS was subsumed into the UKHLS by design. Those individuals subsumed into the UKHLS did so in the 2010-11 period. The BHPS originated with the study of 5,500 British households and contained 10,300 individuals (Murray 2011: 75).

The BHPS produces information on educational background, recent educational attainment, and employment records (Murray 2011: 85). In terms of educational background, the BHPS records all qualifications obtained including at school, higher education and vocational qualifications (Jenkins and Sabates 2007)

Both the BHPS and UKHLS are household panel surveys meaning that unlike the NCDS and BCS respondents were not recruited from birth within a certain week. In order to compare and contrast the three datasets over time synthetic cohorts will be created.

Synthetic Cohorts with the BHPS:

Within BHPS individuals are born between 1904 and 1985. Whilst it would at first seem best to take these birth years as individual cohorts, this would cause problems, biggest of which being taking a yearly approach would leave for an underwhelming sample size per year – in saying this, the work of Murray (2011) has demonstrated using the BHPS that yearly cohorts are sufficient for data analysis of educational data.

The construction of synthetic cohorts withing the BHPS will be achieved by splitting the BHPS waves or years of interview into school years – in other words pooling peoples of similar ages into a cut off point for when the school year starts in September (Murray 2011: 91). This in essence creates ‘synthetic’ cohorts for data analysis. By constructing synthetic cohorts in this way, the data will need to be limited to England and Wales as Scotland has different school years and age cut-off points for pupils (Murray 2011: 101).

Reflecting on Murray’s sample size of synthetic cohorts ranging from 1991-1999 the sizes range from a low of 97 in 1991 to a high of 146 in 1996- a table that presents this sample size can be found in appendix two of Murray (2011)**.** Thus, this doctoral project proposes to emulate Murray’s approach. The sample size is satisfactory for data analysis- including comparison with other datasets (Murray 2011). By maintaining a yearly cohort from 1991-1999 it also allows for a more fine-grained analysis of the time period.

## 5. MISSING DATA

Missing data is an essential component of any longitudinal data analysis – the major concern being that missing data and non-response is bound to affect the inferences made by the analysis of longitudinal studies (Hawkes and Plewis 2006: 479; Silverwood et al 2021: 2). The various factors that account for sample attrition in the datasets outlined above has the potential to present real issues as it relates to comprehensive data analysis. For the purposes of analysis those that exit the sample due to death or emigration are considered ‘natural’ exists from the original sample. Those however that either cannot be found, reject continued participation etc are individuals that we hold partial data on – being able to utilise this partial data within my analysis could be beneficial.

In the following section I discuss the potential of utilising various techniques to tackle the potential issue of missing data, finally settling on the promotion of the use of Multiple Imputation in order to first test the original sample and its ability to holistically analyse the data, and secondly if this is not the case, to present an imputed sample that can.

When dealing with missing data there are three primary types of classification. The first is missing completely at random (MCAR), meaning that missingness does not depend on observed or unobserved values. The second, being missing at random (MAR), meaning that given observed values missingness does not depend on the unobserved ones. Finally, missing not at random (MNAR) meaning that missingness depends on unobserved values (Silverwood et al 2021: 2). If data is found to be MAR then approaches like multiple imputation (MI), inverse probability weighting, and full information maximum likelihood (FIML) are made available – the former being extensively documented with the NCDS in particular in Hawkes and Plewis 2006).

When dealing with MI the subsequent question that naturally follows is how many imputations is sufficient? Silverwood et al (2021: 21) suggest that anything around 50 imputations would be sufficient for reliable estimation of point estimate and estimating p-values with little error.

## 6. Social Class

Social Class as a variable is one that has constant and consistent debate throughout sociological literature – even today whilst current schemas reign dominant, there is no universally held gold-standard of social class within empirical research. The three approaches that are used: social class schemes, social stratification scales, and the micro-class approach (Connelly et al 2016: 1).

This PhD thesis seeks to find the most appropriate measure of social class to fit the given models of analysis – to find the most empirically useful schema to distinguish most effectively the analytical purposes in mind for this research (Bergman and Joye 2001: 14). To reach this end, multiple measures of social class will need to be reflected upon, this following section seeks to establish the major measures of social class and weigh their common strengths and weaknesses, which may affect model parsimony.

One element within this doctoral project that is important is the concept of time. Prestige scales, social class schemes, occupational grading all rely on rather static temporal procedures. Longer-term structural transformations of society will alter the underlying distribution of stratification over time (Lambert and Barnett 2021: 191). The prestige and economic capital of a bank teller is very different from the start of the 1950s compared to present day. With each schema being constructed in different ways, it will be interesting to highlight the potential temporal implications within this research.

CAMSIS:

The Cambridge Social Interaction and Stratification scale (CAMSIS) is a subsequent evolution and development of the Cambridge scale. CAMSIS – similar to the Cambridge scale argues that individuals are embedded within socially moderated spaces and networks within which they engage in various social and economic interactions which are different from interactions with persons who are more distant from these networks (Bergman and Joye 2001: 34). The concept of social structure itself can and does change – there is no a priori assumption (ibid). Just as with the Cambridge scale, CAMSIS offers different scales for both men and women, ‘since holding the same occupation may have different implications for the persons’ social position, depending upon their gender’ (Bergman and Joye 2001: 36).

By its nature, CAMSIS does not delineate between concepts of class and concepts of status (Bergman and Joye 2001: 40). For those social theories that do, there is naturally strong resistance to a measure that seeks to combine both into one singular measure. Another point to highlight is that because of its continuous nature, numerical values are attached to occupations, meaning the relative value of each occupational value is only meaningful in comparison to other occupations on the same scale (Connelly et al 2016: 7).

Goldthorpe and NS-SEC:

Over the years, the work of Goldthorpe has produced a variety of social class schemas (the E-G schema being one example). The most up to date version using Goldthorpe’s theoretical orientation is the NS-SEC schema.

Central to Goldthorpe’s ideas on social class – and the development of social class schemas is employment relations. These employment relations are split into three distinctive formations: those that purchase labour and have authority over those they have purchased labour from, self-employed workers, and employees who sell their labour and are thus under the authority of employers (Bergman and Joye 2001: 12). It is within this differentiation of employment relations that gives rise to class-based patterns of social stratification (Williams 2017). Like other social class schemas already mentioned, a central tendency for Goldthorpe’s study of social class rests upon an analysis of relationships (Goldthorpe and Marshall 1992).

The full NS-SEC classification schema has 11 constituent parts but can be broken down into as few as three. This ability to break down the social class schema is attractive – particularly when using data that has limited sample sizes. Fortunately, for this doctoral project, that does not seem to be an issue.

In testing the criterion-related validity of the Goldthorpe schema, Evans (1992: 211) found that the analysis found strong associations between class and indicators of employment conditions – consistent with the theoretical intentions embodied within the schema.

Registrar General Social Class:

The Registrar General’s Social Class (RGSC) is one of the oldest social class measures in the UK – first used in 1911 to show variation in infant mortality according to parents’ occupation (Szreter 1984: 530). The measure is built upon the assumption that society is graded based upon a hierarchy of occupations ranked according to skill (Murray 2011: 67). The schema is broken into six distinction categories and rages from unskilled manual occupation to higher level professionals (ibid). The RGSC once formed the basis of all commonly used social classifications within Britain (Szreter 1984: 523) which gives the RGSC a widely known level of recognition.

The RGSC as Szreter (1984: 538) articulates, has five distinctive theoretical implications: that social inequality exists within society. There is a single continuous scale of social position/status. That this scale or hierarchy is universal across all of Britain. That status is a uni-dimensional property. Finally, that occupation is the best empirical indicator of the attribute of social position/status. The original creator of the schema, Stevenson, created the model of RGSC based upon an assumption that society is comprised of an upper middle, middle, and working class (Prandy, 1999: 468). This assumption is baked into the theoretical implications mentioned above.

Free School Meals:

Whilst not a measure of social class, free school meals (FSMs) is an important stratification measure (Taylor 2018: 29) to at least discuss because of its past use in social stratification literature in lieu of more sophisticated measures. It is generally held that FSM does not capture the broader ‘multi-dimensionality of social advantage and disadvantage’ (Stopworth et al 2021: 310).

Taylor (2018) addresses the main critiques of using a measure of FSM when other more sophisticated measures are available to be used. Firstly, not all children that may be eligible for FSM may have applied – thus the FSM can never fully capture children in that threshold. Secondly the criteria for entitlement of FSM does not capture all people that are in poverty, or for that matter those that would be understood as ‘working class’. Finally, FSM as a measure does not capture the multi-dimensionality of socio-economic disadvantage and restricts itself to a binary measure based on economic requirements.

Micro-Classes:

Micro-class schema is one that developed out of a frustration that gradational and big-class schemas are purely statistical constructions that ignored occupational boundaries at the heart of the site of production (Bills 2005: 3). By focusing upon the boundaries of production, proponents of micro-class schemas argue that more variability in life chances and behaviour is captured (ibid). Indeed, micro-classes are a response to the question of whether or not social classes really constitute social groups with a high degree of internal homogeneity and with clear boundaries between them (Prandy 1999: 466).

Occupations are often referred to as ‘micro-classes’ in of themselves, primarily because it is argued, occupations embody mechanisms – such as closure, and traits – such as culture that are often attributed towards big classes (Jonsson et al 2009: 982). Indeed, proponents of other social class schema approaches do admit that the micro-class approach – at least when dealing with immobility is an attractive one (Erikson et al 2012: 23).

The micro-class approach has seen some level of success within empirical research (Gayle and Lambert 2011: 12), indeed Gayle and Lambert (2011: 13) also (albeit tentatively) speculate that adopting a micro-class approach for the study of youth transitions may have applications. To go further, one of the key attarctions to the micro-class approach is that by focusing on the sites of production it facilitates the reflection upon substantive differences between occupational boundaries rather than on agglomerate classes (Connelly et al 2016: 8).

## 7. METHODS

The project will employ multivariate statistical techniques to analyse youth transitions. The work will employ suitable statistical modelling techniques from the generalized linear modelling (glm) framework (McCullough and Nelder, 1989). Where appropriate the analysis of the panel data will make the logical extension to models in the generalized linear mixed modelling (glmm) framework (Hedeker, 2005). An innovative feature of the work will be a comparison between random effects models (see Wooldridge, 2010) and generalized estimating equations (gee models) (see Zeger et al., 1988). Generalized estimating equations have largely been overlooked in sociological and educational studies as a method of estimating ‘population average’ effects in panel data, and they are likely to provide an interesting alternative approach to analysing repeated contacts data.

GCSE Operationalisation

When studying educational attainment at the point of mandatory schooling an internally valid and widely used measure is the standard binary measure of ‘achieved five or more GCSEs at grades A\*-C’ or not (Connelly et al 2016: 3). Whilst some have proposed a more qualitative measure – looking at specific subjects as well as raw grades attained, it is more common to either treat GCSE attainment in terms of a binary, or as a set of count data (ibid) – if that is the case then count models would be preferred over standard logistic regression models. The binary approach and the count model approach are both appropriate given the type of data being discussed, for that reason it would be appropriate to operationalise GCSE attainment data in a variety of ways as a form of finding the best model via sensitivity analysis.

## 8. Research Ethics

The project uses existing datasets that are accessible under a standard UK Data Service End User License. The School of Social and Political Science recognises that good ethical practice is a cornerstone of research and a mark of commitment to professionalism. The student and the supervisory team will strictly adhere to the School of Social and Political Science ethical review process which is designed to support researchers in managing risks associated with their research, ensuring the highest professional standards in designing, conducting and disseminating research.

## 9. Timetable

Below shows the projected timetable for the doctoral project over the next 12-month period. Chapter one of the thesis should be finished with revisions around mid to late February, with Chapter two being finished around late July. This should give enough time to complete the last chapter in the next 6 months after that providing the last 6 months of the doctoral project for any major revisions, and preparation for the viva.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Activities | Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | June | July | Aug |
| Literature Review Chapter One | X |  |  |  |  |  |  |  |  |  |  |  |
| Data Analysis Chapter One | X | X | X |  |  |  |  |  |  |  |  |  |
| Sensitivity Analysis |  | X | X |  |  |  |  |  |  |  |  |  |
| Construction of Synthetic Cohorts |  | X | X |  |  |  |  |  |  |  |  |  |
| Handling Missing Data |  | X | X |  |  |  |  |  |  |  |  |  |
| Write up Chapter One |  |  | X | X |  |  |  |  |  |  |  |  |
| Potential Revisions Chapter One |  |  |  | X | X | X |  |  |  |  |  |  |
| Literature Review Chapter Two |  |  |  |  |  |  | X | X | X |  |  |  |
| Data Analysis Chapter Two |  |  |  |  |  |  |  |  | X | X |  |  |
| Write Up Chapter Two |  |  |  |  |  |  |  |  |  | X | X |  |
| Potential Revisions Chapter Two |  |  |  |  |  |  |  |  |  |  | X | X |

Chapter One of the doctoral project will be focusing upon the impact of social class on educational qualifications at aged 16. For the NCDS this will look at O-levels, and for the BCS and UKHLS this will look at GCSEs. In the next chapter I provide a brief look at some of the current data analysis work for the NCDS and BCS cohorts using the Registrar Generals social class schema. Specifically, this chapter reflects on the connection that passes at age 16 has on the decision to stay on within further education. The full analysis will provide a sensitivity analysis of multiple social class variables to find the model parsimonious, also an inclusion of a variety of models: logit, count, gee, as well as deal with missing data, and include the UKHLS synthetic cohorts.

This section is thus split into two parts. Firstly, an analysis of those continuing to stay within education using the NCDS dataset will be used with Social Class as an independent variable in a simple logit model. Secondly, this will be replicated using the BCS dataset with findings discussed first and then comparisons between the two being made.

The first lot of data work undertaken using the NCDS was a logistic regression model looking into the odds ratio of individuals that stay in education and their likelihood of having 5 or more O-level passes.

Using NCDS data from sweep 16, and controlling for fathers’ social class, sex, and ethnicity the following logistic regression model presents findings on the odds ratio of individuals that stay in education and their likelihood to have 5 or more O-level passes. Table 1 provides a breakdown of the descriptive statistics thus far.

Table 2 depicts those individuals who are in Education has 5.3 times the odds of those that are not in Education of obtaining 5 or more O-level passes when controlling for all other covariates, those that are Men are 0.8 times the odds compared to women of obtaining 5 or more O-level passes, ethnic minorities are not statistically significant. Interestingly there is a very apparent trend looking at father’s social class. There is a significant downward trend when comparing professional social class to others that shows those on the lower end of the social class hierarchy have worse odds in comparison to the sons of professionals in obtaining 5 or more O-level passes.

On average (when controlling for covariates), looking at table 3 we see that 70 out of 100 people in education obtain 5 or more O-Level passes, while only 34 out of 100 do so who are not in education (predictive margins). Accordingly, looking at table 4, being in education increases a person's likelihood of having obtained 5 or more O-Levels by 36 percentage points (controlling for covariates).

Using BCS data from sweep 26, and controlling for fathers’ social class, sex, and ethnicity the following logistic regression model presents findings on the odds ratio of individuals that stay in education and their likelihood to have 5 or more O-level passes. Table 5 provides a breakdown of the descriptive statistics thus far.

Table 6 depicts those individuals who are in Education has 1.6 times the odds of those that are not in Education of obtaining 5 or more O-level passes when controlling for all other covariates, gender and ethnic minorities are not statistically significant. Interestingly there is a very apparent trend looking at father’s social class. There is a significant downward trend when comparing professional social class to others that shows those on the lower end of the social class hierarchy have worse odds in comparison to the sons of professionals in obtaining 5 or more O-level passes.

On average (when controlling for covariates), looking at table 7 we see that 70 out of 100 people in education obtain 5 or more O-Level passes, while 61 out of 100 do so who are not in education (predictive margins). Accordingly, looking at table 8, being in education increases a person's likelihood of having obtained 5 or more O-Levels by 9 percentage points (controlling for covariates). The BCS data in comparison to the NCDS data does prompt some interesting discussion (and evidently further analysis). It appears that there has been a downward trend over time of the impact of having 5 or more passes has on individuals staying on within education. There is however, still an effect and rather prominently, whilst gender appears to have no statistical significance in the BCS model, social class still remains significant over time.

## 10. Training and Conference Attendance

The Social Stratification Conference in 2021 and 2022 was attended.

Training at the Essex Summer school had to be postponed due to illness but planned to be attended next year – focusing upon multilevel modelling.

Training in the use of the software program R for data visualisation and the use of its Shiny packages.

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**Appendix:**

|  |  |  |
| --- | --- | --- |
| **Table 1: Descriptive Statistics** | | |
|  | n | % |
| Number of O-level Passes |  |  |
| <5 O-Level Passes | 8,277 | 66.16% |
| 5 or More O-Level Passes | 4,233 | 33.84% |
| In Education |  |  |
| Not In Education | 11,769 | 93.88% |
| In Education | 767 | 6.12% |
| Sex |  |  |
| Female | 6,270 | 50.02% |
| Male | 6,266 | 49.98% |
| Ethnicity |  |  |
| White | 10,953 | 95.93% |
| Non-White | 465 | 4.07% |
| Father’s Social Class |  |  |
| Professional | 569 | 5.42% |
| Inter-mediate prof | 2,100 | 20.00% |
| Skilled non-manual | 1,004 | 9.56% |
| Skilled manual | 4,661 | 44.39% |
| Semi-skilled Non-manual | 155 | 1.48% |
| Semi-skilled manual | 1,403 | 13.36% |
| Unskilled Manual | 608 | 5.79% |
|  |  |  |
|  |  |  |
| n |  | 18558 |
| Data Source: NCDS Sweep 16 | | |

**Table 2 Logistic Regression Models using NCDS – The odds ratio of having 5 0r more O-levels and staying in education post-mandatory schooling age (odds ratio)**

|  |  |
| --- | --- |
|  | (1) |
| VARIABLES | Model 1 |
|  |  |
| In Education | 5.32\*\*\* |
|  | (0.63) |
| Male | 0.79\*\*\* |
|  | (0.04) |
| Non-White | 0.93 |
|  | (0.17) |
| II | 0.38\*\*\* |
|  | (0.05) |
| III NM | 0.22\*\*\* |
|  | (0.03) |
| III M | 0.11\*\*\* |
|  | (0.01) |
| IV NM | 0.09\*\*\* |
|  | (0.02) |
| IV M | 0.08\*\*\* |
|  | (0.01) |
| V | 0.05\*\*\* |
|  | (0.01) |
| Constant | 3.48\*\*\* |
|  | (0.43) |
|  |  |
| Observations | 7,379 |

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05

**Table 3 Margins Predicted Possibility of Positive Outcome using NCDS**

|  |  |
| --- | --- |
|  | (1) |
| VARIABLES | Margins |
|  |  |
| Not In Education | 0.34\*\*\* |
| In Education | (0.00)  0.70\*\*\*  (0.02) |

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05

**Table 4 Contrast at Margins using NCDS**

|  |  |
| --- | --- |
|  | (1) |
| VARIABLES | Margins |
|  |  |
| In Education vs Not In Education | 0.36  (0.02) |

|  |  |  |
| --- | --- | --- |
| **Table 5: Descriptive Statistics** | | |
|  | n | % |
| Number of O-level Passes |  |  |
| <5 O-Level Passes | 2,071 | 45.43% |
| 5 or More O-Level Passes | 2,488 | 54.57% |
| In Education |  |  |
| Not In Education | 7,737 | 96.23% |
| In Education | 303 | 3.77% |
| Sex |  |  |
| Female | 5,815 | 50.06% |
| Male | 5,800 | 49.94% |
| Ethnicity |  |  |
| White | 9,006 | 95.96% |
| Non-White | 379 | 4.04% |
| Father’s Social Class |  |  |
| I | 511 | 8.03% |
| II | 1,888 | 29.66% |
| III Non-manual | 653 | 10.26% |
| III Manual | 2,567 | 40.32% |
| IV | 594 | 9.33% |
| V | 153 | 2.40% |
|  |  |  |
|  |  |  |
| n |  | 13474 |
| Data Source: BCS Sweep 26 | | |

|  |  |  |
| --- | --- | --- |
| **Table 6: Logistic Regression Model using BCS- The odds ratio of having 5 0r more O-levels and staying in education post-mandatory schooling age (odds ratio)** | | |
|  | obin | |
| In Education |  |  |
| Not In Education | 1.00 |  |
|  | (0.00) |  |
| In Education | 1.58 |  |
|  | (0.38) |  |
| Sex |  |  |
| Female | 1.00 |  |
|  | (0.00) |  |
| Male | 1.07 |  |
|  | (0.10) |  |
| Ethnicity |  |  |
| White | 1.00 |  |
|  | (0.00) |  |
| Non-White | 0.86 |  |
|  | (0.27) |  |
| Father’s Social Class |  |  |
| I | 1.00 |  |
|  | (0.00) |  |
| II | 0.53 | \*\*\* |
|  | (0.10) |  |
| III Non-manual | 0.41 | \*\*\* |
|  | (0.09) |  |
| III Manual | 0.19 | \*\*\* |
|  | (0.04) |  |
| IV | 0.18 | \*\*\* |
|  | (0.04) |  |
| V | 0.08 | \*\*\* |
|  | (0.03) |  |
| Intercept | 4.35 | \*\*\* |
|  | (0.77) |  |
| Number of observations | 2187 |  |
| AIC | 2760.73 |  |
| BIC | 2811.95 |  |
| *\*\*\* p<.001, \*\* p<.01, \* p<.05 Data Source: nhanes2b Data Source: nhanes2b* | | |

**Table 7 Margins Predicted Possibility of Positive Outcome using NCDS**

|  |  |
| --- | --- |
|  | (1) |
| VARIABLES | Margins |
|  |  |
| Not In Education | 0.61\*\*\* |
| In Education | (0.00)  0.70\*\*\*  (0.02) |

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05

**Table 8 Contrast at Margins using NCDS**

|  |  |
| --- | --- |
|  | (1) |
| VARIABLES | Margins |
|  |  |
| In Education vs Not In Education | 0.09  (0.02) |

Github page with codebooks and do files at: [Scott0atley/YouthTransitions: PhD Project for Youth Transitions (github.com)](https://github.com/Scott0atley/YouthTransitions)