



## Childhood intelligence, locus of control and behaviour disturbance as determinants of intergenerational social mobility: British Cohort Study 1970

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### ABSTRACT

Determinants of intergenerational social mobility were examined in 8287 men from the British Cohort Study 1970. Confirming previous research, parental social class, childhood intelligence, and educational qualifications were the strongest predictors of occupational social class at the age of 30. Locus of control and childhood behaviour disturbance had independent significant effects and accounted for additional amounts of variance. Self-esteem had only a trivial influence on social mobility. Structural equation modelling using full information maximum likelihood estimation demonstrated that: educational qualifications mediated other predictors' effects, accounting for the greatest amount of variance in people's own social status attainment; there was a substantial overlap of childhood behavioural disturbance, intelligence, and locus of control; there were effects of parental social class on own occupational social class attainment. Intergenerational social mobility is determined by a nexus of inter-correlated variables whose independent effects remain difficult to disentangle.

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### 1. Introduction

Social mobility is understood as the transition of an individual or social object from one social position to another (Sorokin, 1959). Early theoretical frameworks, such as status attainment theory (Blau & Duncan, 1967), predicted that intergenerational social mobility would be limited by the predefining effects of parental social class. More recently it has become clear that, although parental social class remains an important influence, social mobility is also strongly linked with mental ability and educational attainment (Bowles & Gintis, 2002; Deary et al., 2005; Herrnstein & Murray, 1994; Strenze, 2007). For example, Deary et al. (2005) found, in a male Scottish population sample ( $N=243$ ), that intelligence in childhood accounted for 23.2% and parental social class for 17.6% of the total variance in social status attainment in mid life

at the age of 50 years (Fig. 1). In this and other studies, parental social class and mental ability significantly affected the level of education which had a mediating function on attained social status, whether defined by occupation or other indicators (Breen & Goldthorpe, 2001; Deary et al., 2005; Nettle, 2003).

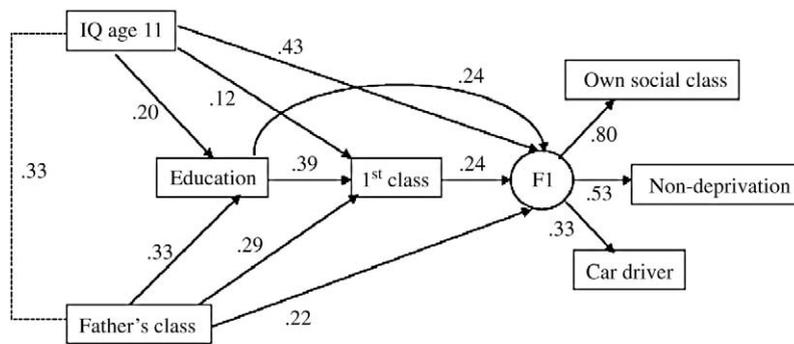
However, mental ability, education and parental social class only account for a part of the total variance in social status attainment. Deary et al.'s (2005) path model accounted for 44.1% of the variance in social status attainment; other models account for even less variance (e. g. Bond & Saunders, 1999). Other factors that might influence social status attainment in adult life are behaviours and attitudes in childhood (Bowles & Gintis, 2002; Colom, Escorial, Shih, & Privado, 2007; Jackson, 2006; Jencks, 1979; Osborne Groves, 2005; Sigle-Rushton, 2004; Silles, 2005).

Childhood behaviours predict not only personality structure in adulthood but also employment status and occupational social class attainment (e. g. Caspi, 2000; Caspi, Roberts, & Shiner, 2005; McCrae et al., 2000). In addition, childhood behaviours and personality are determinants of school and university achievements (e. g. Feinstein, 2000). For example, in a sample of Spanish school children,

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**Fig. 1.** Direct and indirect influences of parental social class and childhood mental ability on education, status of first employment and social attainment in midlife. Adapted from Deary et al. (2005) with permission from the authors. Note. Arrows represent significant path parameters; the dashed line represents a correlation without causal inference. Social status attainment is derived from measures of own social class, non-deprivation and car ownership. Key: IQ age 11 = Childhood mental ability; Father's class = Parental social class; 1st class = Status of first job; F1 = Latent trait of social status attainment at midlife.

temperament difficulties accounted for a greater amount of variance in academic performance than cognitive ability (32.5% versus 29.2%, respectively; Colom et al., 2007). Investigations of the National Child Development Study 1958 showed that behavioural characteristics like withdrawal, aggression and resentfulness, assessed at ages of 5, 11 and 16 years, significantly affected adult earnings (Silles, 2005), occupational attainment (Jackson, 2006), social exclusion (Sigle-Rushton, 2004), and labour market returns (Osborne Groves, 2005). Thus, childhood behaviours are likely to contribute, in addition to parental social class and mental ability, to educational achievement and social class attainment.

### 1.1. Locus of control and self-esteem

Locus of control (Rotter, 1966) and self-esteem (Rosenberg, 1979) are plausibly important antecedents of attainment, but have been under-examined in current research (Wang, Kick, Fraser, & Burns, 1999). Rotter (1966) suggested that people either believe in their own ability to control events (internal locus of control), or attribute their personal circumstances to external forces (external locus of control). In the context of education, an external locus of control predicts poor grades, whereas an internal locus of control precedes superior academic performance (Nelson & Mathia, 1995; Osborn & Milbank, 1987). Pearlin and Kohn (1966) identified differences in child-rearing patterns of middle class parents, who encouraged children's self-direction, and working class parents, who were more likely to emphasise conformity to externally imposed conditions. Working class parents tend to endorse obedience, neatness, and honesty in child-rearing, whereas middle class parents stress curiosity, self-control and happiness (Bowles & Gintis, 1972). Locus of control may therefore partially mediate effects of parental social class on educational and social status attainments.

Self-esteem is defined as the sum of evaluations across salient attributes of one's self and personality and reflects an evaluation of one's worth and importance (Rosenberg, 1979). Previously, high self-esteem was associated with superior academic performance, advanced educational qualifications, and higher income levels (Goldsmith, Veum, & Darity, 1997;

Schoon, 2001). Moreover, individuals with increased self-esteem are more likely to assign success to internal attributes, whereas people low in self-esteem tend to explain accomplishments in terms of external circumstances (Abdallah, 1989). Indeed, locus of control and self-esteem are significantly related (Wang et al., 1999). It is plausible that both these characteristics are associated with social mobility.

### 1.2. The present study

The current study aims to evaluate predictors of occupational social class attainment at the age of 30 in a sample from the British Cohort Study 1970 (BCS 1970). The outcome variable, however, can be measured more accurately in men than in women, whose occupational social class is affected by childbearing (Dex, Ward, & Joshi, 2006). Thus, the present study will include an all-male sample.

Previous investigations often relied on few indicators of childhood behaviour and potentially biased observer ratings (e. g. Jackson, 2006; Osborn & Milbank, 1987). In the present study, multiple assessments of childhood behaviour will be analysed, including teacher's and mother's ratings, as well as children's self-reports of locus of control and self-esteem.<sup>2</sup> Overall, parental social class and the subject's intelligence are hypothesised to be substantially correlated and to affect occupational status directly and indirectly through mediated effects by educational attainment. Locus of control and self-esteem are predicted to be positively correlated and to mediate effects of parental social class on educational and occupational attainment. Finally, childhood behaviour disturbance as rated by mothers and teachers is assumed to affect educational attainment and occupation status.

<sup>2</sup> The BCS 1970 comprises 8 items adapted from the Eysenck Personality Inventory (Eysenck & Eysenck, 1975), which were completed by children at the age of 10 under teacher's supervision. Children indicated how much they could identify with personal characteristics like being 'nervous', 'lively' or 'easy-going'. However, the items were found to be psychometrically unsatisfactory and thus, were omitted from the analyses.

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