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Downward mobility, opportunity hoarding and the 'glass floor'

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LSE

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Background

- The study of social mobility has traditionally tended to focus on measuring rates, changes in these rates over time and international rankings.
- More recently studies have looked beyond single summary measures at variation in rates across a distribution. In some cases measurement has focused on subgroups.
- In terms of directional measures, there has tended to be a focus on upward mobility.

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Motivation

- More recently attention has shifted to exploring advantage. Stubbornly high levels of inequality, increasing shares of income and wealth held by an elite group, concern about the hoarding of opportunities in top professions have led many to question how advantage is transmitted across generations.

- A study for the US has shown evidence of a 'glass floor' whereby those from advantaged family backgrounds are found to be more likely to be high earners than cognitive skill assessments predict (Reeves and Howard, 2014).

- A core of social commentators have long noted the paradox that many call for higher social mobility without regard for the less politically palatable fact that for relative upward mobility to increase so too must downward mobility.

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Research Questions

- Is there evidence of a ‘glass floor’ in the UK?
- What factors enable well-off parents effectively to construct a glass floor and limit potential downward mobility?
- Is there evidence that opportunities are ‘hoarded’ by advantaged families?

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Methodology

- Track the progress of children through to labour market outcomes at age 42.
- Delineate children by family social and economic background.
- Compare the outcomes of children with initially high and initially low cognitive skills by family background.
- Seek to identify what factors partially or fully account for social and economic gradients in labour market success.

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Data source – BCS70

- British Birth Cohort Survey 1970.
- Following the lives of around 17,000 people born in Britain during a week in 1970.
- Eight main follow-up surveys have been conducted so far.
- Information from the birth, age 5, age 10 and age 16 surveys to measure family background, cognitive skills, social and emotional skills, and schooling.
- To assess adult success we use information on employee earnings and self-employed income, and occupation at age 42.

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Cognitive skills

Cognitive skills
There is a common notion of 'intelligence', or IQ, as an underlying component of skills in reasoning, memory, and other cognitive abilities. These 'talents' may be to some extent innate, or be cultivated by appropriate training, incentives and challenges (Joshi, 2014).

Composite measure of cognitive skill based on the following five tests:

- **Copying Designs Test**: An assessment of visual-motor co-ordination.
- **English Picture Vocabulary Test**: A test of verbal vocabulary.
- **Human Figure Drawing (Draw-a-Man) Test**: Intended to reflect conceptual maturity.
- **Complete a Profile Test**: Similar to the draw-a-man test, the child completes an outline picture of a human face in profile by filling in features (eyes, ears, etc.).
- **Schonell Reading Test**: a reading test originally designed to assess a child's 'reading age'.

Quintiles of standardised composite score (Parsons, 2014)

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Family background measures

1. Parental social class

RG Social Class

I	Professional
II	Managerial and Technical
III–NM	Skilled – Non-Manual
III-M	Skilled – Manual
IV	Partly Skilled
V	Unskilled

2. Quintiles of equivalised family income (age 10)

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Outcome measures

- **Top quintile of hourly labour income at age 42**

We also looked at high earnings for employees (only) and weekly as well as hourly measures

- **Top job – NS-SEC 1**

1.1 Large employers and higher managerial and administrative occupations

1.2 Higher professional occupations

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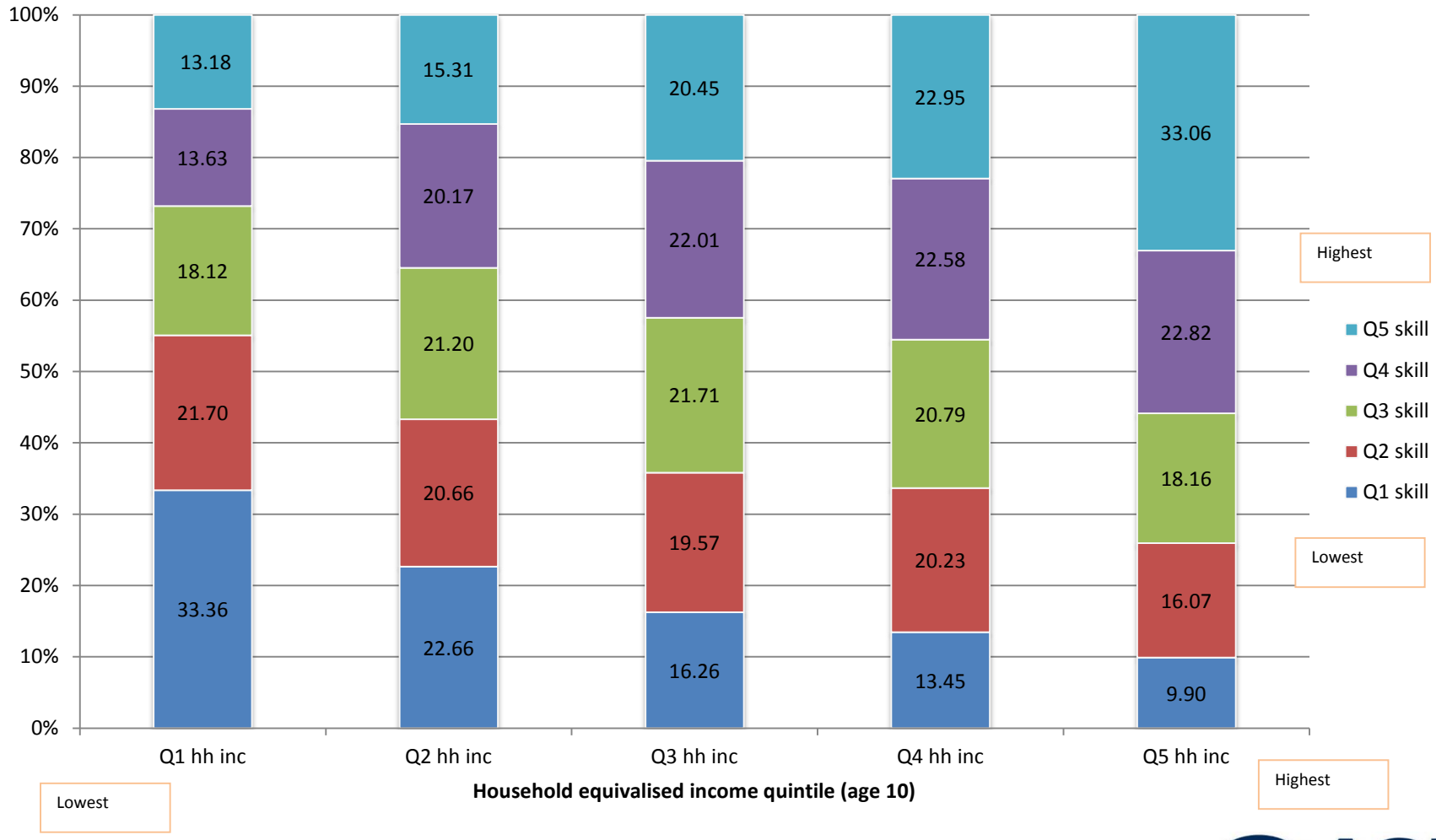
Family income and cognitive skills



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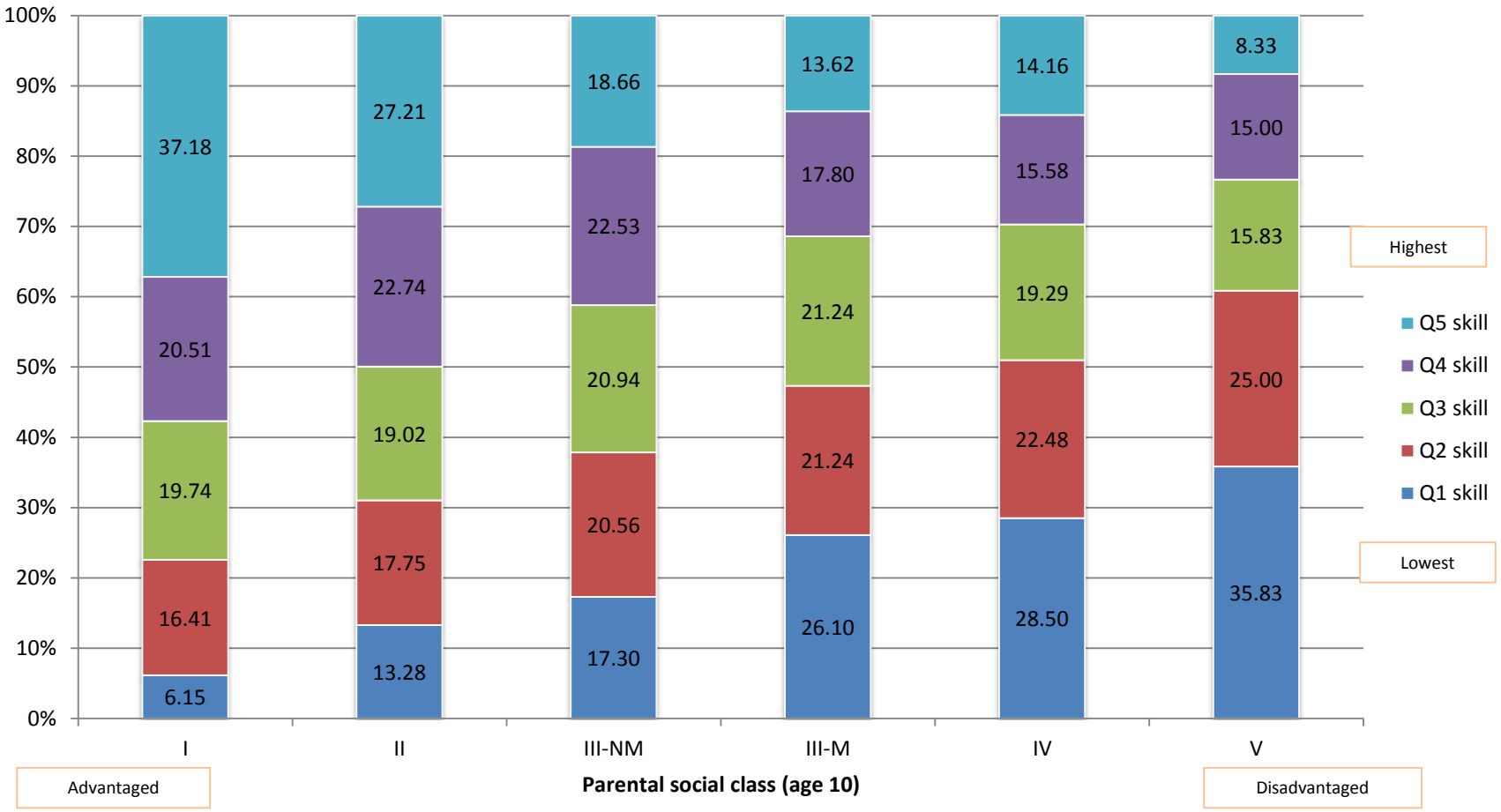
Social class and cognitive skills



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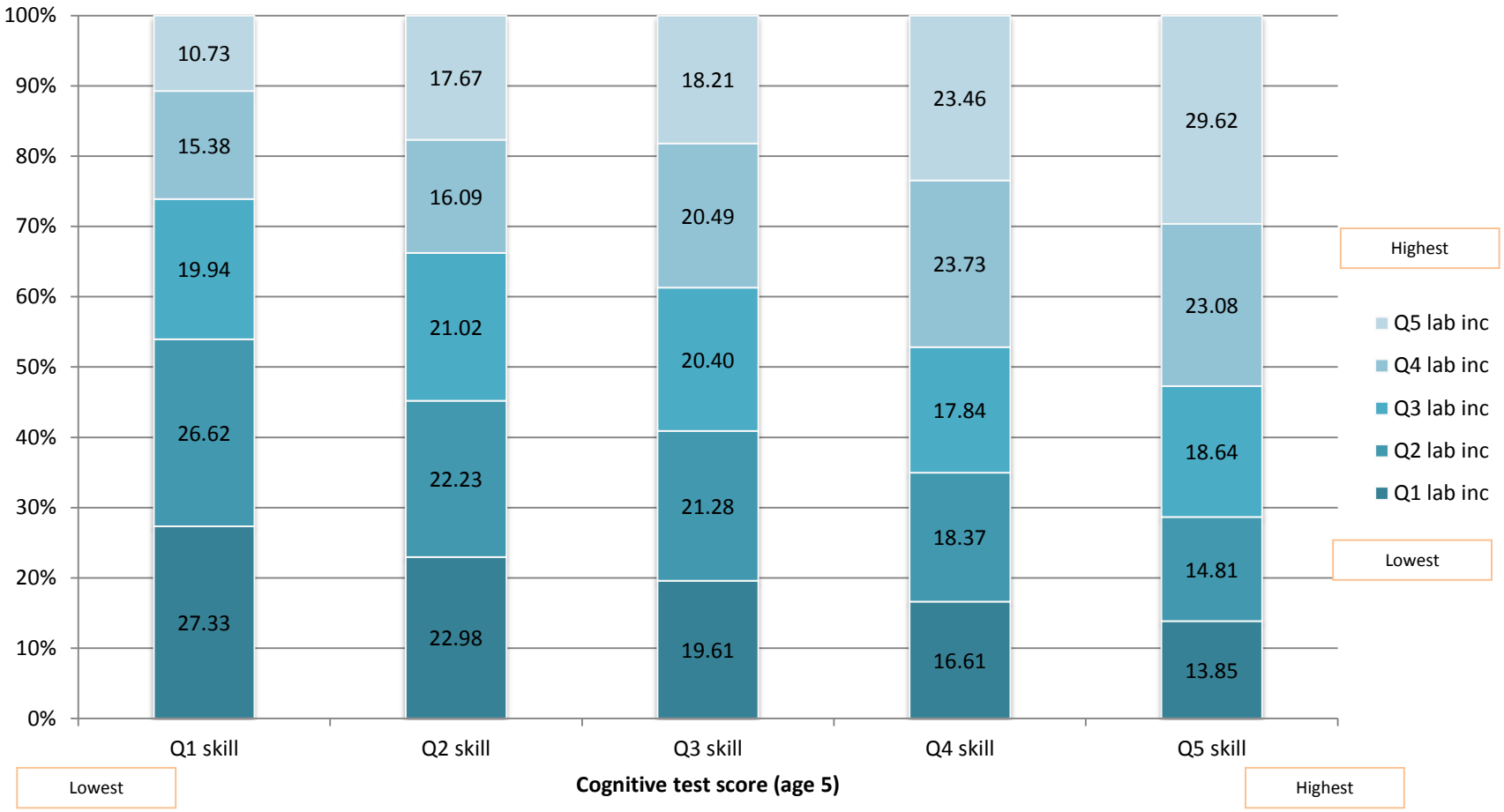
Cognitive skills and labour income



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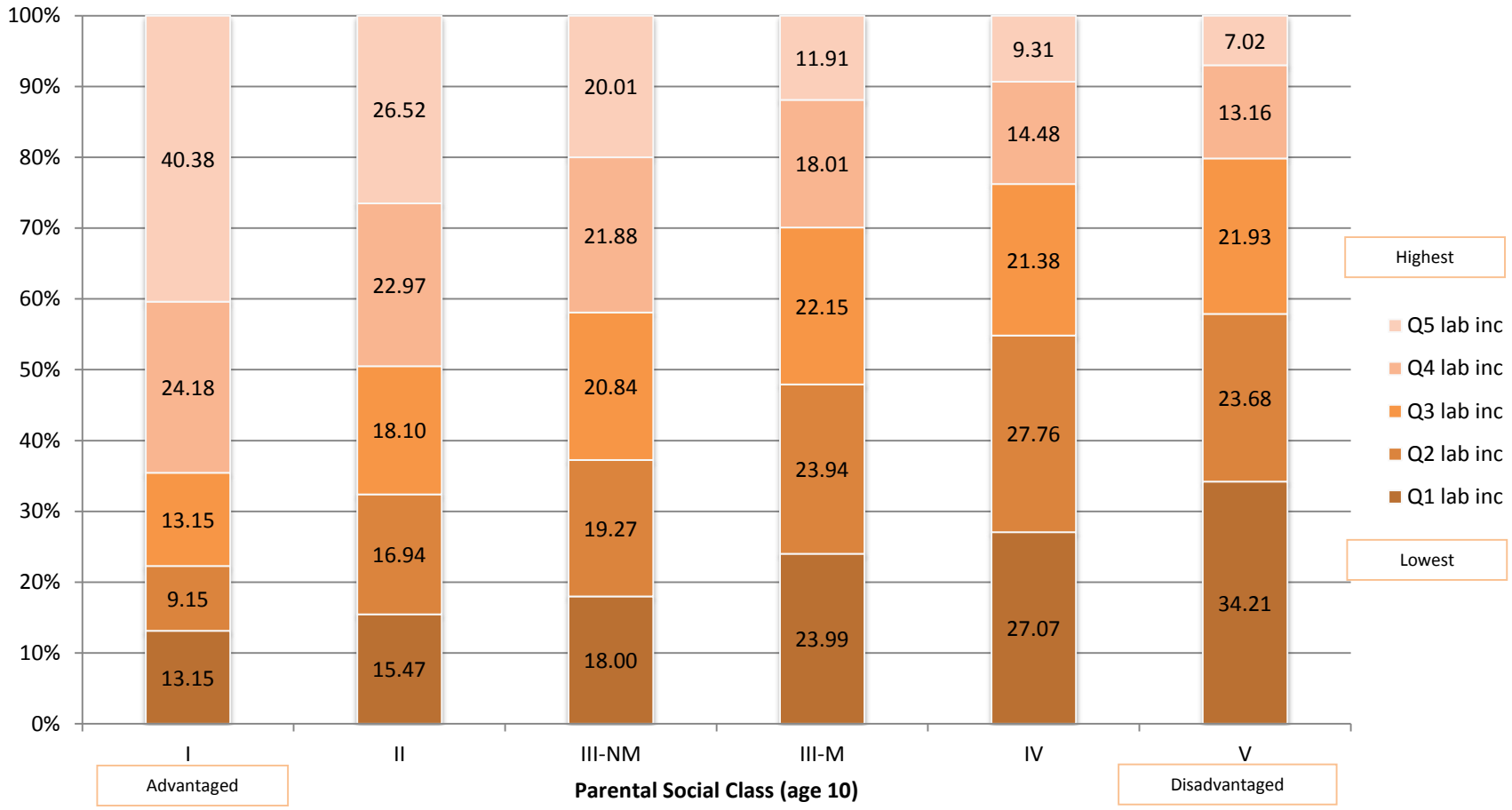
Social class and labour income



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Percent of cohort members from Social Class I (professionals) or the highest family income quintile in the top hourly earnings quintile age 42

	Social Class			Income
	Parental	Father's father	Mother's father	Family
Birth	44%			
Age 5	38%	41%	30%	
Age 10	40%			36%
Age 16	40%			38%

Percent of cohort members from Social Class V (unskilled) or the lowest family income quintile in the top hourly earnings quintile age 42

	Social Class			Income
	Parental	Father's father	Mother's father	Family
Birth	8%			
Age 5	9%	16%	15%	
Age 10	7%			11%
Age 16	10%			12%

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Accounting for social class and family income gradients - explanatory variables

- Parental education (age 5)
- Maths and reading aptitude (age 10)
- Social and emotional skills (age 10)
  - Self-esteem
  - Locus of control
  - Behavioural problems
- Type of secondary school attended
- Highest educational qualifications

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Non-cognitive skills – locus of control

CARALOC Locus of Control Scale	
1	Do you feel that most of the time it is not worth trying hard because things never turn out right anyway?
2	Do you feel that wishing can make good things happen?
3	Are people good to you no matter how you act towards them?
4*	Do you like taking part in plays or concerts?
5	Do you usually feel that it is almost useless to try in school because most children are cleverer than you?
6	Is a high mark just a matter of luck for you?
7*	Are you good at spelling?
8	Are tests just a lot of guess work for you?
9	Are you often blamed for things which just aren't your fault?
10	Are you the kind of person who believes that planning ahead makes things turn out better?
11*	Do you find it easy to get up in the morning?
12	When bad things happen to you, is it usually someone else's fault?
13	When someone is very angry with you, is it impossible to make him your friend again?
14	When nice things happen to you is it only good luck?
15*	Do you feel sad when it is time to leave school each day?
16	When you get into an argument is it usually the other person's fault?
17	Are you surprised when your teacher says you've done well?
18	Do you usually get low marks, even when you study hard?
19*	Do you like to read books?
20	Do you think studying for tests is a waste of time?

Notes: * Items 4, 7, 11, 15 and 19 are distractor questions and do not count. Each "no" response counts as one point, except item 10 where "yes" equals one point. Scores are summed to create a scale where high scores indicate higher locus of control.

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Sample characteristics

		High skill	Low skill
Parental education (highest)	No qualification (ref)	0.23	0.43
	Vocational ed	0.12	0.14
	O levels	0.24	0.22
	A levels	0.12	0.07
	SRN	0.02	0.02
	Cert ed	0.03	0.01
	Degree +	0.23	0.09
	Other	0.01	0.01
Reading aptitude age 10	Q1 lowest (ref)	0.07	0.27
	Q2	0.11	0.20
	Q3	0.21	0.20
	Q4	0.18	0.11
	Q5 highest 10	0.28	0.09
Maths aptitude age 10	Q1 lowest (ref)	0.07	0.27
	Q2	0.12	0.21
	Q3	0.18	0.15
	Q4	0.22	0.14
	Q5 highest	0.26	0.09

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Outcome: High earnings at age 42

Early low attainers	Average marginal effects	Model 1		Model 2		Model 3	
Family income age 10	Q1 low (ref)						
	Q2	0.032		0.012		0.006	
	Q3	0.041		0.011		0.006	
	Q4	0.076	***	0.021		0.016	
	Q5 high	0.127	***	0.031		0.011	
Parental qualification	No qual (ref)						
	Voc ed			0.005		0.004	
	O levels			0.069	***	0.042	**
	A levels			0.040		0.008	
	Degree +			0.127	***	0.062	**
Maths aptitude age 10	Q1 low (ref)						
	Q2			0.071	***	0.064	**
	Q3			0.094	***	0.076	***
	Q4			0.126	***	0.097	***
	Q5 high			0.167	***	0.108	***
Locus of control age 10	Q1 low (ref)						
	Q2			0.007		-0.006	
	Q3			0.066	**	0.048	*
	Q4			0.048	*	0.031	
	Q5 high			0.042		0.021	
Secondary school type	Comprehensive (ref)						
	Grammar					0.092	**
	Secondary modern					-0.008	
	Private					0.112	***
Highest qual level	None (ref)						
	GCSE or less					-0.029	
	A Level					0.001	
	FE or HE (vocational)					0.061	**
	Degree+ (academic)					0.165	***

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Outcome: Top job

Early low attainers	Average marginal effects	Model 1		Model 2		Model 3	
Parental social class age 10	SC I	0.106	***	0.005		-0.036	
	SC II	0.057	***	0.018		0.010	
SC III-M (ref)	SC III-NM	0.035	*	0.020		0.011	
	SC IV	-0.032		-0.007		-0.012	
	SC V	-0.038		0.005		0.002	
Parental qualification	No qual (ref)						
	Voc ed			0.035	*	0.034	*
	O levels			0.036	**	0.014	
	A levels			0.027		-0.001	
	Degree +			0.100	***	0.051	**
Maths aptitude age 10	Q1 low (ref)						
	Q2			0.060	***	0.049	**
	Q3			0.074	***	0.063	***
	Q4			0.066	**	0.039	
	Q5 high			0.105	***	0.057	*
Locus of control age 10	Q1 low (ref)						
	Q2			-0.004		-0.016	
	Q3			0.040	*	0.017	
	Q4			0.055	***	0.040	*
	Q5 high			0.048	*	0.020	
Secondary school type	Comprehensive (ref)						
	Grammar					0.073	**
	Secondary modern					-0.030	*
	Private					0.097	***
Highest qual level	None (ref)						
	GCSE or less					0.003	
	A Level					0.010	
	FE or HE (vocational)					0.081	***
	Degree+ (academic)					0.158	***

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Outcome: High earnings at age 42

Early high attainers	Average marginal effects	Model 1		Model 2		Model 3	
Family income age 10	Q1 low (ref)						
	Q2	0.016		0.005		-0.001	
	Q3	0.074	**	0.038		0.020	
	Q4	0.130	***	0.077	**	0.071	**
	Q5 high	0.217	***	0.115	***	0.080	**
Parental qualification	No qual (ref)						
	Voc ed			0.105	***	0.081	**
	O levels			0.065	**	0.037	
	A levels			0.087	**	0.054	
	Degree +			0.114	***	0.024	
Maths aptitude age 10	Q1 low (ref)						
	Q2			0.125	**	0.097	
	Q3			0.190	***	0.149	***
	Q4			0.203	***	0.154	***
	Q5 high			0.305	***	0.218	***
Locus of control age 10	Q1 low (ref)						
	Q2			0.039		0.021	
	Q3			0.088	**	0.065	*
	Q4			0.098	***	0.047	
	Q5 high			0.079	**	0.035	
Secondary school type	Comprehensive (ref)						
	Grammar					-0.002	
	Secondary modern					0.040	
	Private					0.107	***
Highest qual level	None (ref)						
	GCSE or less					-0.052	
	A Level					0.015	
	FE or HE (vocational)					0.054	
	Degree+ (academic)					0.239	***

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Outcome: Top job

Early high attainers	Average marginal effects	Model 1		Model 2		Model 3	
Parental social class age 10	SC I	0.221	***	0.080	**	0.047	
	SC II	0.158	***	0.077	***	0.062	**
SC III-M (ref)	SC III-NM	0.076	***	0.024		0.023	
	SC IV	-0.059		-0.058		-0.047	
	SC V	-0.238	*	-0.128		-0.098	
Parental qualification	No qual (ref)						
	Voc ed			0.106	***	0.082	***
	O levels			0.073	***	0.042	
	A levels			0.083	**	0.057	*
	Degree +			0.114	***	0.033	
Maths aptitude age 10	Q1 low (ref)						
	Q2			0.129	**	0.099	*
	Q3			0.190	***	0.154	***
	Q4			0.194	***	0.150	***
	Q5 high			0.293	***	0.215	***
Locus of control age 10	Q1 low (ref)						
	Q2			0.057	*	0.035	
	Q3			0.093	**	0.068	*
	Q4			0.107	***	0.056	*
	Q5 high			0.086	***	0.039	
Secondary school type	Comprehensive (ref)						
	Grammar					-0.009	
	Secondary modern					0.029	
	Private					0.105	***
Highest qual level	None (ref)						
	GCSE or less					-0.056	
	A Level					0.000	
	FE or HE (vocational)					0.039	
	Degree+ (academic)					0.218	***

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Results – not shown

- Women significantly less likely to be high earners/in a top job
- Reading aptitude age 10 – insignificant
- Moderate and severe behavioural problems at age 10 – negative
- Self-esteem insignificant

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Predicted probabilities – high earner

		Low attainers		High attainers	
		Male	Female	Male	Female
Family income	Income Q1	14%	6%	25%	12%
	Income Q5	16%	7%	35%	19%
Parents' highest qualification	No qualification	13%	5%	26%	12%
	Degree	22%	10%	29%	14%
Secondary school	Comprehensive	15%	6%	28%	14%
	Private	33%	18%	43%	25%
Highest qualification	No qualification	12%	5%	19%	9%
	Degree	40%	23%	52%	33%

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Predicted probabilities – high earner

		Low attainers		High attainers	
		Male	Female	Male	Female
Family income	Income Q1	14%(14%)	6%(6%)	25%(23%)	12%(12%)
	Income Q5	16%(31%)	7%(17%)	35%(48%)	19%(32%)
Parents' highest qualification	No qualification	13%	5%	26%	12%
	Degree	22%	10%	29%	14%
Secondary school	Comprehensive	15%	6%	28%	14%
	Private	33%	18%	43%	25%
Highest qualification	No qualification	12%	5%	19%	9%
	Degree	40%	23%	52%	33%

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Amelie grew up in a family with lowish income (Q2), her father left school with O levels, her maths aptitude was average, she attended a Comprehensive secondary school and left after taking GCSEs. Her predicted probability of being in the top earnings group is **8%**

Charlotte's family enjoyed a high income and both of her parents were graduates, she struggled when starting school but with her parents help she managed to improve her maths and by 10 was at the top of her maths set. She went to a Private secondary school and went on to attain a Degree. Her predicted probability of being in the top earnings group is **73%**

Jonny didn't like school but his middle income parents, were determined that he would do well and paid for some extra maths lessons which helped Jonny gain a place at the local Grammar School. Jonny had a strong sense that he could create a successful business and took a diploma in business studies before becoming self employed. His predicted probability of being in the top earnings group is **55%**

Stephen's parents had a very low income. They had left school without qualifications. He had little interest in school work he didn't like tests and didn't see the point of doing homework as he never did well at school. He went to the local secondary modern after failing his 11+ and left school without any qualifications. His predicted probability of being in the top earnings group is **7%**

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Summary

- We find social and economic gradients in family background in terms of the likelihood that individuals will be high earners or in a top job at age 42

- These gradients are observed within early cognitive skill groups (low attainers and high attainers)

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Accounting for social gradients in career success

Positive and significant

- Parental education; particularly graduate qualification is positive and significant
- Maths aptitude at age 10
- Locus of control at age 10
- Grammar or private secondary school
- Educational attainment (in particular degree)

Negative and significant

- Moderate and severe behavioural problems (age 10)

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Taking all of these factors into consideration…

- We find that due to the advantageous position of initially ***low attaining*** children from higher income and social class backgrounds we can largely account for social and economic gradients

- For initially ***high attaining*** children social and economic background differences remain 'unexplained'. This shows that initially low attaining children from less advantaged backgrounds are less successful at, or less able to, convert high early potential into career success.

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Policy implications

- Parental education
  - Help children to improve cognitive skills by age 10 (particularly maths)
  - Help children develop non-cognitive skills
  - Help children pass 11+
  - Choice of primary and secondary schools
  - Help with higher education and career choices

  - Exploit networks to help children in the labour market
  - Development of 'soft skills' – accents, hobbies, social conduct, attitudes

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Policy implications

- Type of secondary school
  - Grammar school – coaching to pass the 11+
  - Private school wage premium
    - Additional skills rewarded in the labour market
    - A “little extra something” - signals
  - Not all about Grammar and private school education as less advantaged children more likely to be in poorly performing schools and attain less in outstanding schools relative to advantaged peers (Clifton and Cook, 2012).

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Conclusions

- We find evidence suggesting that children from higher income and social class backgrounds hoard opportunities in schools and subsequently in the labour market.
- A range of factors and influences help to limit downward mobility among advantage children with early low cognitive skills.
- In an era where “room at the top” is not expanding, policy makers serious about increasing upward mobility for children from less advantaged backgrounds will need to address barriers that are preventing them from reaching their full potential and remove barriers that block downward mobility.

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