

# Higher education expansion in the UK: what has been the impact on graduate earnings and access to career opportunities?

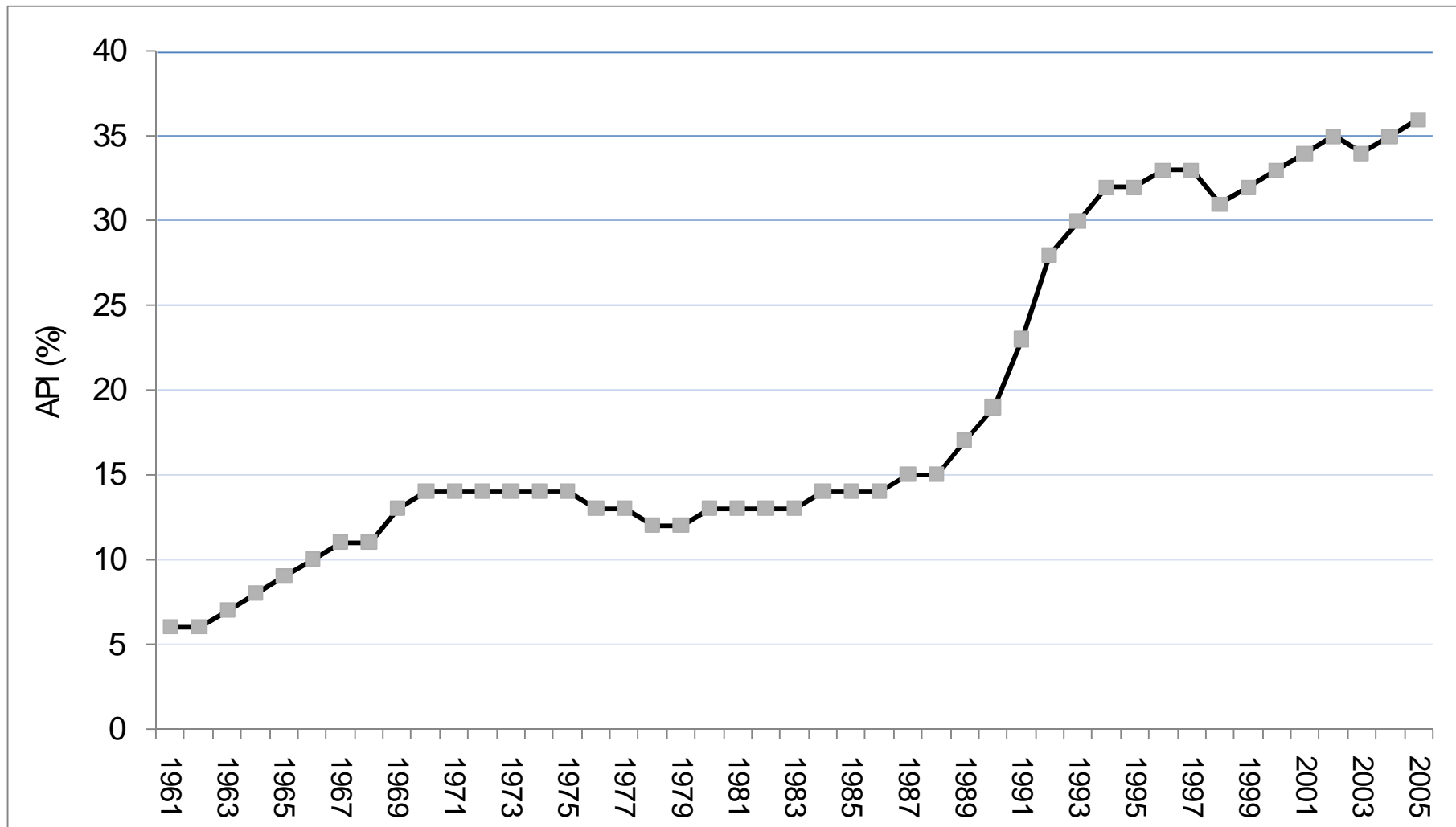
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# What I'm going to talk about

- Higher education expansion in the UK and its context
- Recent labour market and occupational trends and the relationship between these and HE expansion.
- Labour market change, in terms of the balance of occupations, skill level, and the changing 'graduate premium' among early career graduates.
- The implications for equal opportunities in employment and the big policy questions.

## Participation by young people in Higher Education, Age Participation Index (API) Great Britain, 1961 to 2005



Source: Elias and Purcell (2009)

The Age Participation Index (API) measures the number of home domiciled young (aged under 21) initial entrants to full-time and sandwich undergraduate courses, expressed as a proportion of the average 18 to 19 year old Great Britain population.

# Why? – Growth in demand – or supply-driven?

- Human capital – in particular, university-educated labour – is increasingly regarded as crucial to economic development – also as access to opportunities for individuals
  - Successive governments have invested in increasingly high levels of education on assumption that knowledge-based skills and innovation are increasingly crucial for competitiveness;
  - evidence that educated labour is more innovative and adaptable;
  - development of **social** and **material** educational infrastructure.
- Economic restructuring – global, sectoral, organisational
  - Changing demand for skills and knowledge due to
    - transformation of UK manufacturing from labour-based to knowledge-based (e.g. growth of science-based industries – chemicals, biotechnology, ICT – depends on highly skilled and educated labour);
    - growth and globalisation of market services.
- Impact of technology on information management and communication.
- Commitment to the eradication of inequalities

‘Across the developed world, and across the political spectrum, everybody agrees about the importance of education. It’s good for society, which needs the contribution and the economic productivity – not to mention the taxes – of a skilled workforce, and it’s good for individuals. People with more education earn more, and are more satisfied with their work and leisure time, are less likely to be unemployed, more likely to be healthy, less likely to be criminals, more likely to volunteer their time and vote in elections.’

Richard Wilkinson and Kate Pickett (2009:103) *The Spirit level: Why More Equal Societies Almost Always Do Better*. London: Allen Lane

‘Upon the education of the people of this country the fate of this country depends’.

Benjamin Disraeli, speaking in the House of Commons, 15th June 187

# The big issues relating to HE expansion

- Has the expansion of higher education led to greater equality of opportunity..
  1. ...to access HE?
  2. ...to benefit from it?

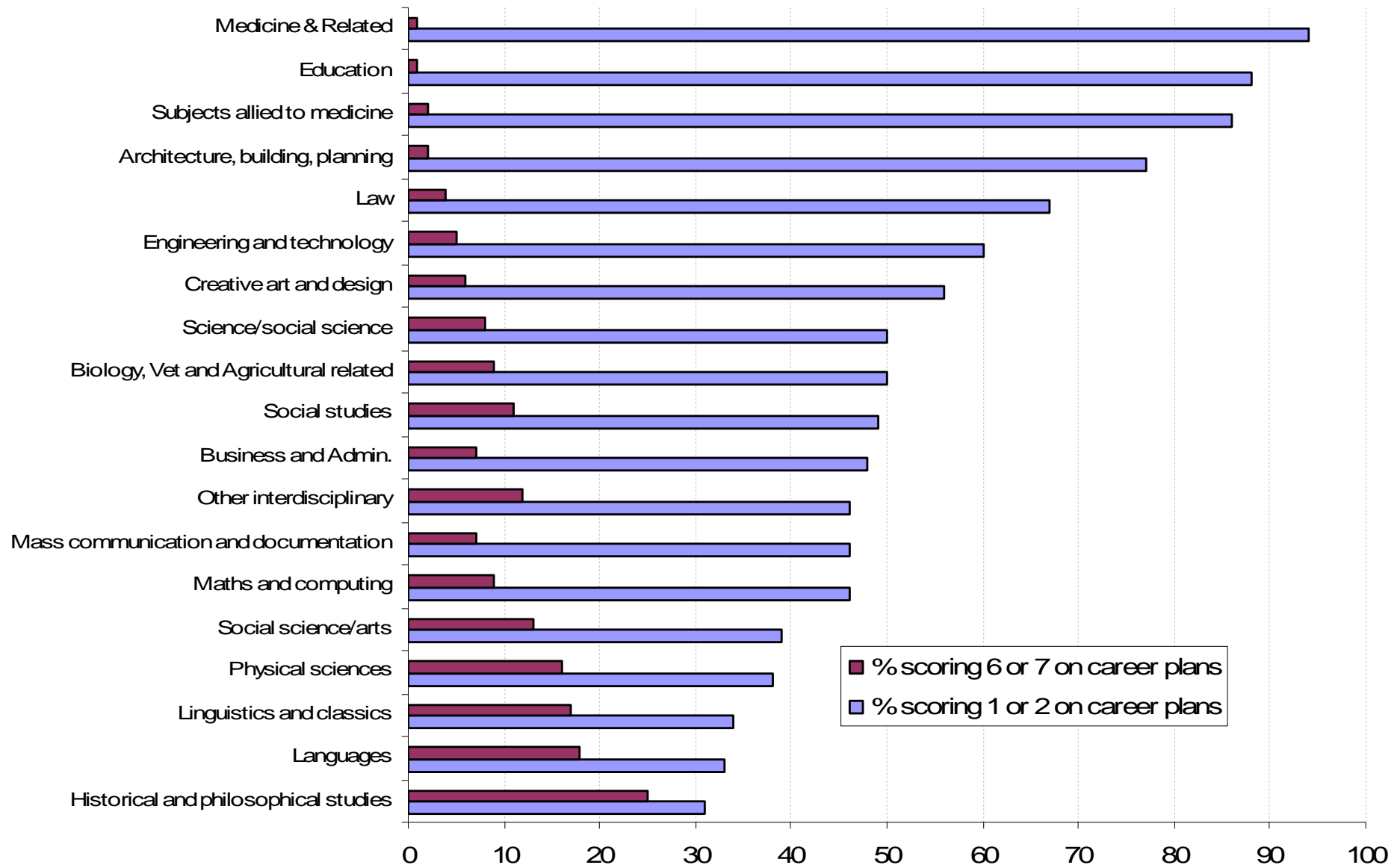
i.e. How far does HE participation challenge or reinforce social and cultural advantage and disadvantage?
- Are students and graduates obtaining skills and knowledge that
  1. ...enhances their career opportunities?
  2. ...leads to employment that uses their HE skills and knowledge?
- Is current policy to expand higher education justified in the light of current and recent students' and graduates' experiences and the impact of this public and private investment in HE?

# Key characteristics of 2006 students (selected subjects)

	% Female	% Asian	% Black	% 25+	% 'professional managerial background
ALL 2006 accepted UK applicants	55.4	9.6	5	11.8	41.3
Pre-clinical Medicine	57.5	<b>18.5</b>	2.7	16.3	58.2
Pharmacy etc	57.3	<b>42.7</b>	<b>13.2</b>	13.3	35.6
Nursing	<b>90.5</b>	<b>2.9</b>	6.1	<b>42.2</b>	<b>25.7</b>
Physics	<b>19.4</b>	5.3	1.5	2.9	<b>57.8</b>
Mathematics	43.5	14.8	2.1	2.9	48.9
Computer Science	<b>12.1</b>	15.0	6.1	9.3	34.1
Mechanical Engineering	<b>6.7</b>	10.4	4.6	5.5	44.9
Economics	<b>29.0</b>	<b>22.8</b>	6.5	<b>1.5</b>	<b>51.9</b>
Sociology	<b>74.7</b>	8.2	6.2	13.6	37.1
Media Studies	48.8	5.3	4.4	4.8	37.5
History by period	45.5	<b>2.6</b>	<b>0.6</b>	7.2	<b>52.4</b>
Design Studies	62.1	6.1	3.2	9.4	36.6
Languages	<b>71.3</b>	<b>3</b>	<b>2</b>	6.8	<b>52.2</b>

Source: Futuretrack survey Stage 1 (Purcell *et al.* 2008)

# Clarity of career plans by subject

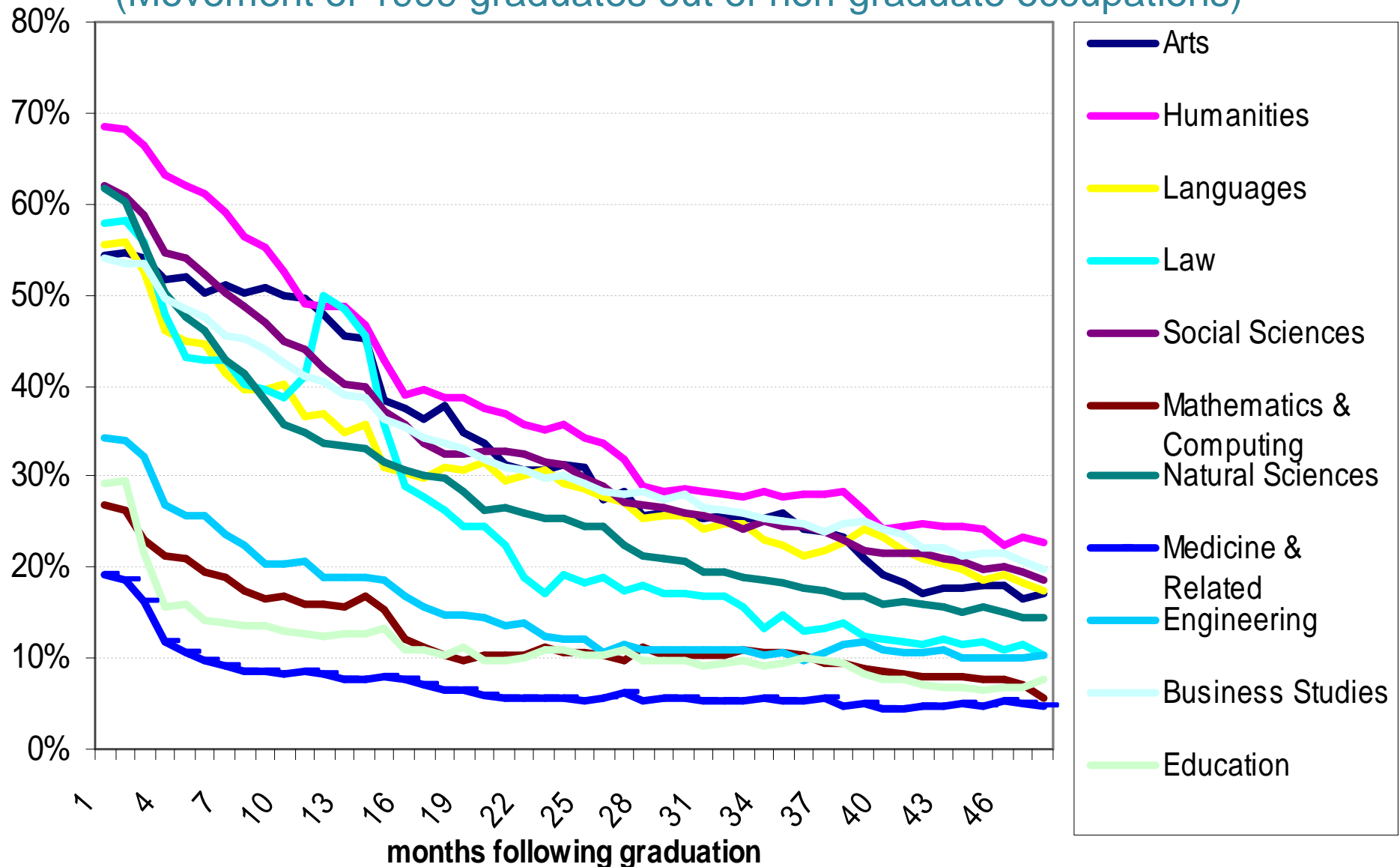


Source: Futuretrack survey Stage 1 (Purcell *et al.* 2008)



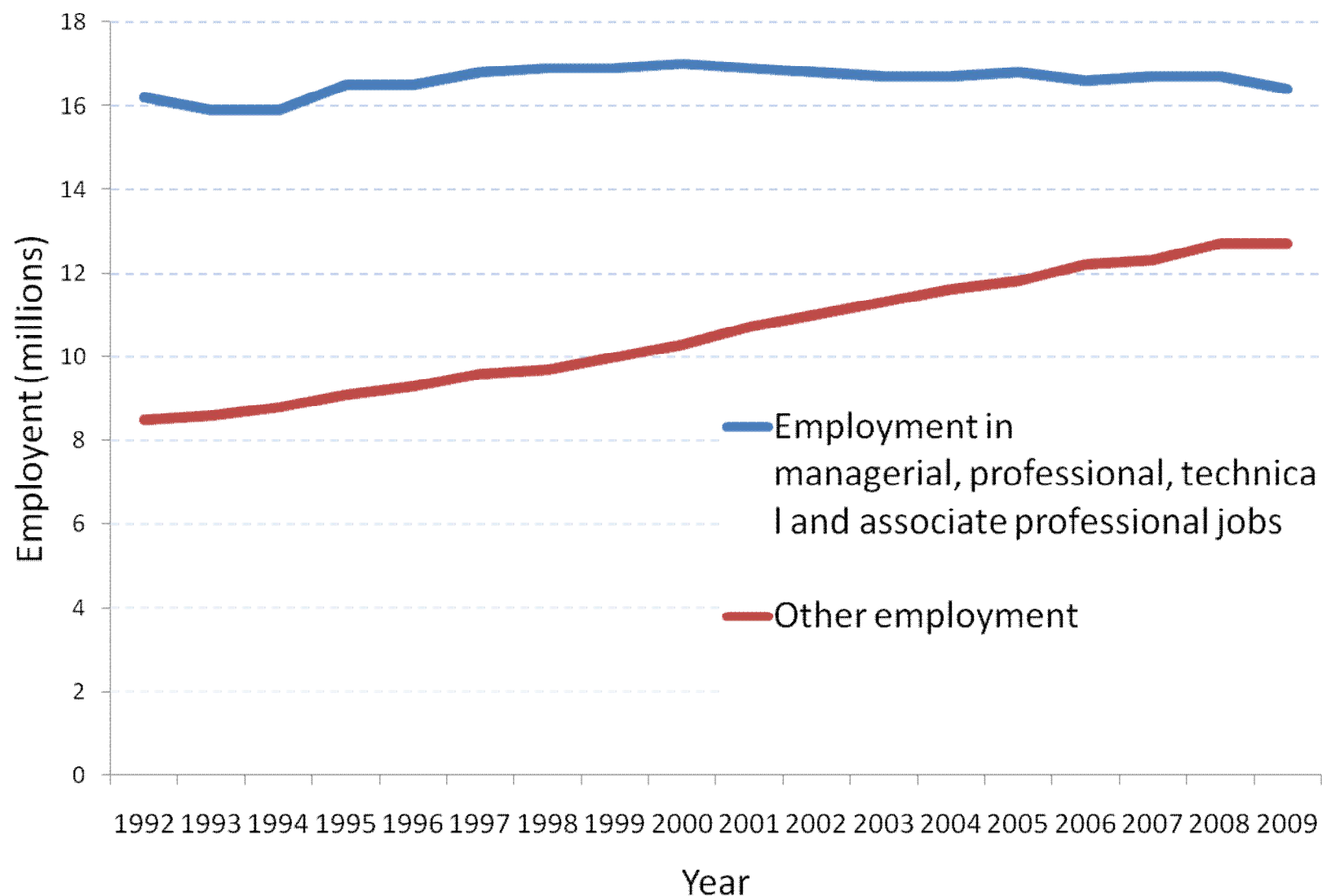
# Does subject of degree matter for graduate career opportunities?

(Movement of 1999 graduates out of non-graduate occupations)



Source: *Class of '99 survey* (Purcell *et.al* 2005)

# Changing structure of occupations, UK 1999-2009



Source: UK Labour Force Surveys, 1992 – 2009 (Quarter 2 each year)

# Analysing occupational change in more detail: a classification of graduate jobs

- Traditional graduate jobs

The established professions, for which, historically, the normal route has been via an undergraduate degree programme

- Modern graduate jobs

The newer professions, particularly in management, IT and creative vocational areas, engineering, which graduates have been entering increasingly since educational expansion in the 1960s

- New graduate jobs

Areas of employment to which graduates have increasingly been recruited in large numbers; mainly administrative, design, technical and 'caring' occupations

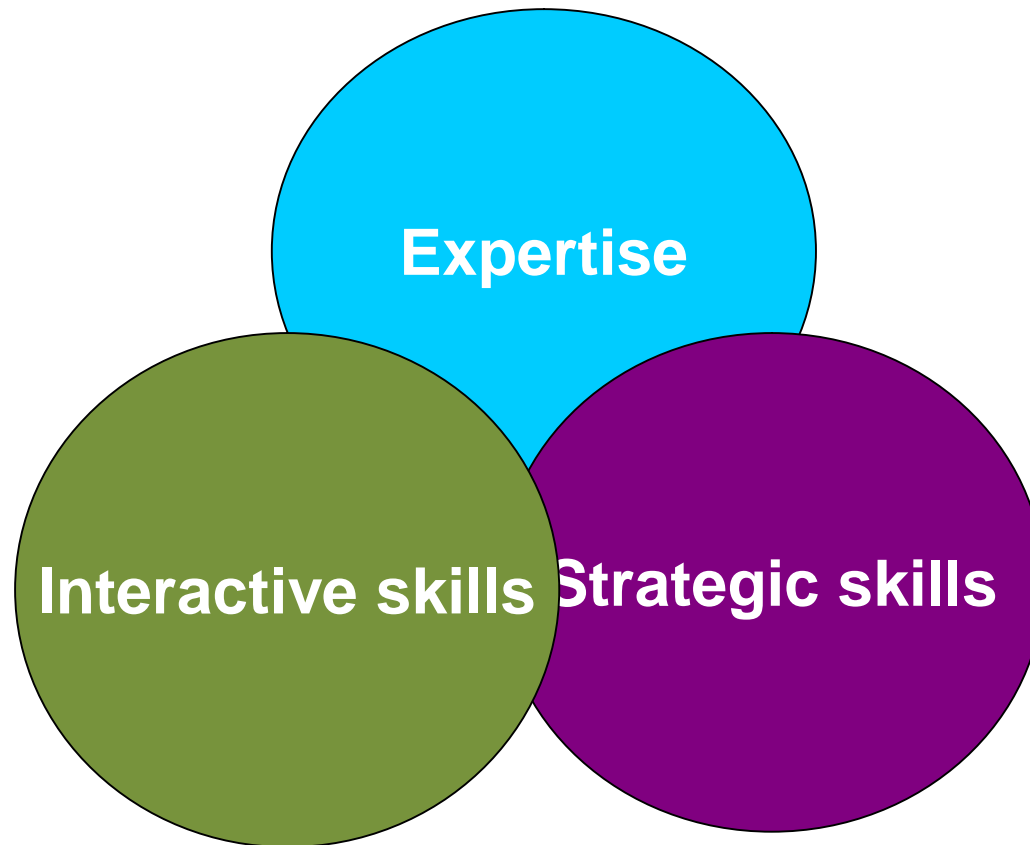
- Niche graduate jobs

Occupations where the majority of incumbents are not graduates, but within which there are stable or growing specialist *niches* which require higher education skills and knowledge

For further details, see

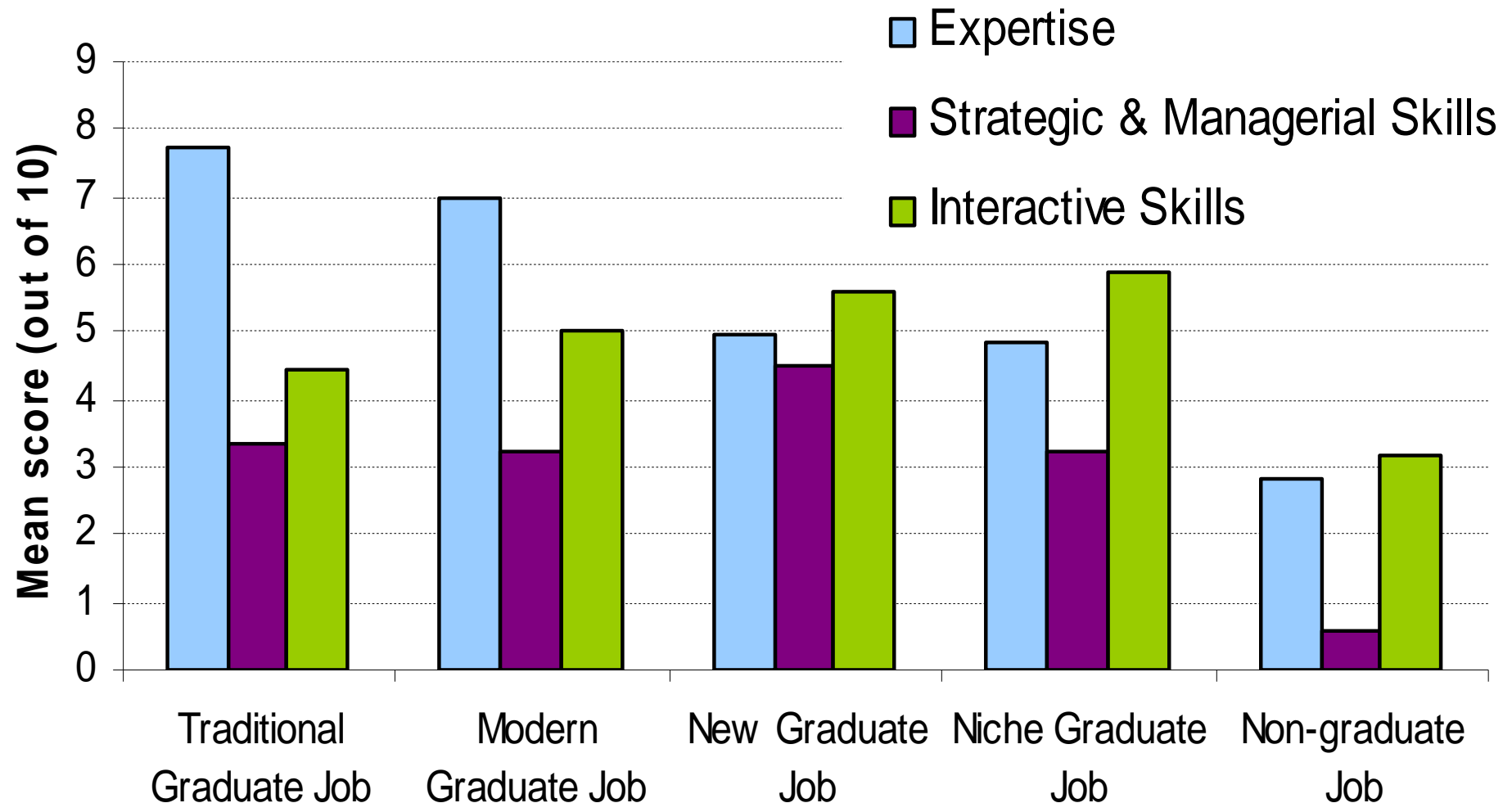
<http://www2.warwick.ac.uk/fac/soc/ier/research/completed/7yrs2/rp6.pdf>

We identified three clusters of skills in graduate jobs



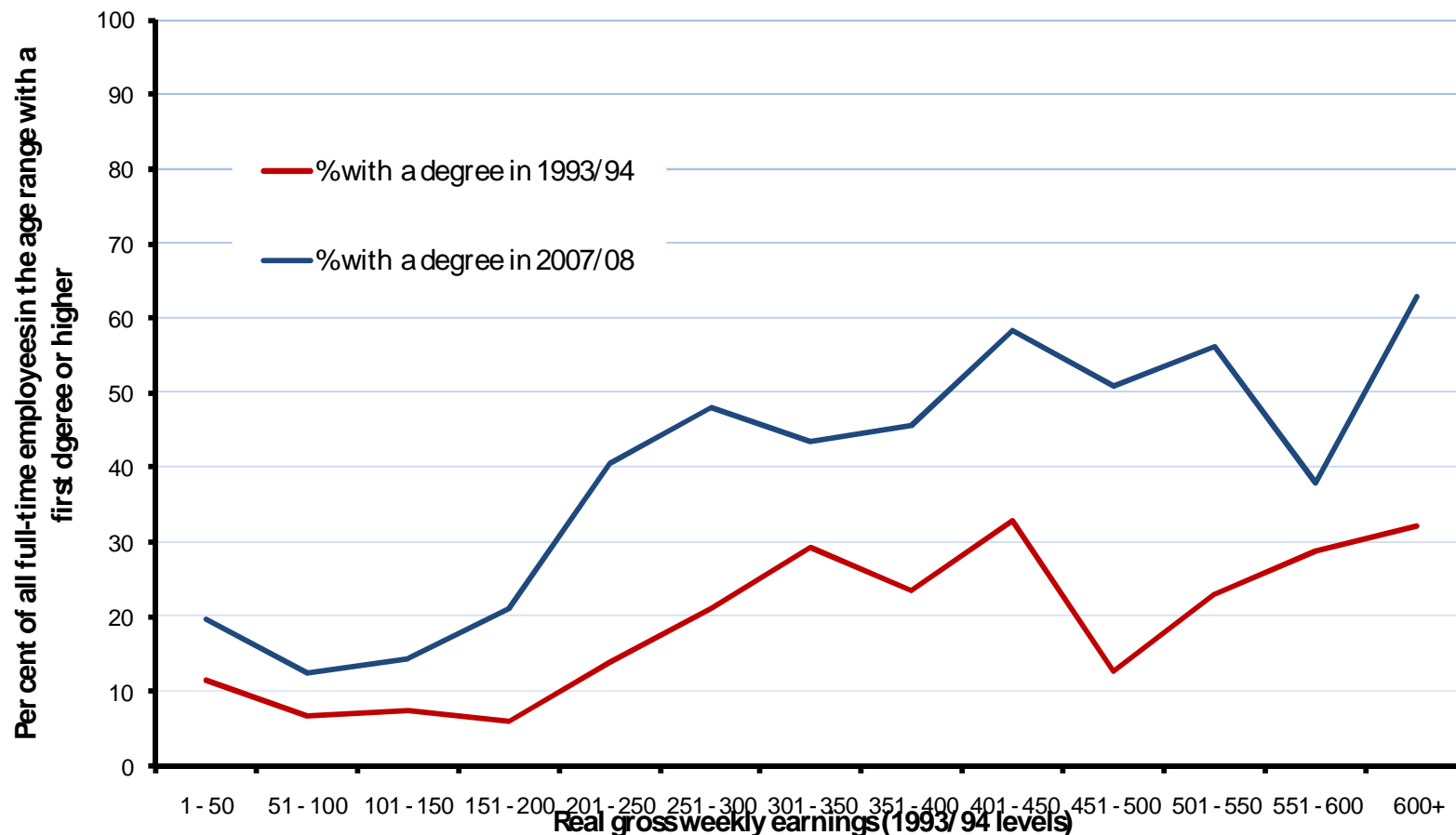
Source: Graduate Careers Seven Years On survey (Purcell, Wilton and Elias paper in progress).

## Use of skill clusters in current jobs by SOC(HE)



Source: *Graduate Careers 7 Years On* transcribed follow-up interview data ( 201 respondents)

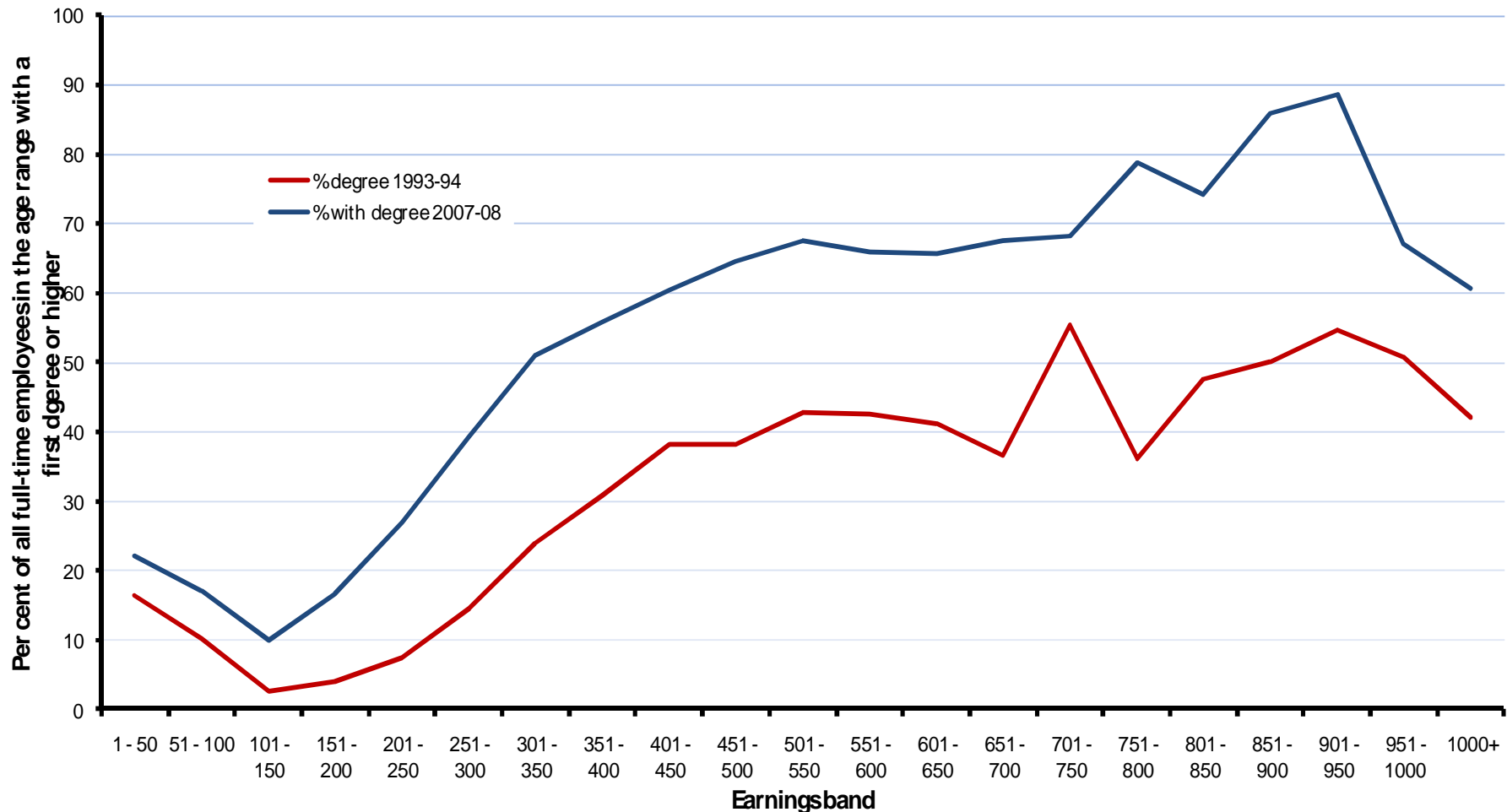
# Change in the distribution of 21-25 year old graduates by earnings, 1993-94 compared with 2007-08



Source: LFS (Elias and Purcell 2009)

Note: Earnings in 2007-08 have been deflated by 75 per cent – the growth in earnings of all employees between 1993-4 and 2007-08. The mean pay of full-time employees aged 21-25 year in 1993/94 was £214.

# Change in the distribution of 26-35 year old graduates by earnings, 1993-94 compared with 2007-08



Source: LFS (Elias and Purcell 2009)

Note: Earnings in 2005-6 have been deflated by 75 per cent – the growth in earnings of all employees from 1993-94 to 2007-08

## Impact of changes, by SOC(HE)

OCCUPATIONAL CATEGORY	Change in 26-35 women's share of this category 1993-4/2007/8	IMPACT ON THE full-time GRADUATE PREMIUM	IMPACT ON THE Full-time PAY GAP
Traditional graduate jobs	44% - 53%	No change (13%)	Down from 88% - 83%
Modern graduate jobs	37% - 43%	2% - zero	Up from 81% - 83%
New graduate jobs	38% - 47%	19% - 16%	Down from 97% - 87%
Niche graduate jobs	43% - 46%	26% - 40%	Little change ( 96% - 95%)
Non-graduate jobs	46% - 44%	20% - 18%	Up from 75% - 81%



Occupational category (SOC[HE])	Employment change(00s) 1993-04 to 2007-08 (%)	% with degree		% female		Graduate premium <sup>1</sup> (%)	
		1993-94	2007-08	1993-94	2007-08	1993-94	2007-08
<b>Traditional graduate occupations</b>	<b>+205 (69)</b>	<b>82</b>	<b>86</b>	<b>44</b>	<b>53</b>	<b>13</b>	<b>13</b>
Biological scientists & biochemists	+13 (58)	79	88	44	48	9	8
<b>Modern graduate occupations</b>	<b>+204 (51)</b>	<b>51</b>	<b>70</b>	<b>37</b>	<b>43</b>	<b>2</b>	<b>0</b>
Software engineers, programmers	+33 (37)	45	63	18	13	2	-2
Social workers, probation officers	-7 (-23)	30	58	67	82	19	11
<b>New graduate occupations</b>	<b>+122 (22)</b>	<b>37</b>	<b>57</b>	<b>38</b>	<b>47</b>	<b>19</b>	<b>16</b>
Personnel, training etc managers	+3 (9)	40	62	62	61	41	25
Laboratory technicians	-9 (-36)	33	50	45	59	17	5
<b>Niche graduate occupations</b>	<b>+36 (3)</b>	<b>15</b>	<b>37</b>	<b>43</b>	<b>46</b>	<b>26</b>	<b>40</b>
Nurses	-47 (-28)	5	34	89	85	0	7
<b>Non graduate occupations</b>	<b>-664 (-17)</b>	<b>3</b>	<b>11</b>	<b>46</b>	<b>44</b>	<b>20</b>	<b>18</b>
Accounts clerks, book-keepers etc	-46 (-27)	9	25	75	71	40	22
Sales assistants	-35 (-16)	2	12	79	64	18	1
<b>Total</b>	<b>-97 (-2)</b>	<b>15</b>	<b>32</b>	<b>44</b>	<b>45</b>	<b>42</b>	<b>48</b>

Source: UK Labour Force Surveys, 1993-94 and 2004-06. Information above is for the 26-35 age range in each period. (c.f. Elias and Purcell 2009).

Note: 1. The 'graduate premium' is simply the ratio of the gross weekly earnings of degree and non-degree holders for employees in full-time employment

‘Controversies in the natural sciences are usually confined to experts; most people do not have strong views on rival theories in particle physics. But they do have views on how society works. Social theories are partly theories about ourselves; indeed, they might almost be regarded as being part of our self-awareness or self-consciousness of societies .While natural scientists do not have to convince individual cells or atoms to accept their theories, social theorists are up against a plethora of individual views and powerful vested interests’.

(IWilkinson and Pickett, *op cit.* 2009: x-xi)

## Research findings from current and recent projects

- Women more likely than men to participate in HE; and they achieve better results in secondary education.
- *But* access to HE and choices remains dependent on cultural capital and similarly-qualified female applicants to HE have lower chance of acceptance than males...
- The move to mass participation in HE has not led to widespread graduate under-employment, BUT policy-relevant findings include:
  - very different outcomes for graduates with different skills, qualifications and access to labour markets
  - persistent and increasing gender pay as careers progress;
  - gender segmentation in graduate jobs and lower reported satisfaction with career development among female graduates;
  - persistent under-representation of women in 'top jobs';
  - significantly lower fertility among female graduates (around one third remaining childless at age 40).

For more information about the IER projects and publications cited see [www.go.warwick.ac.uk/glmf](http://www.go.warwick.ac.uk/glmf)