

Original citation:

Purcell, Kate and Tzanakou, Charikleia (2016) Life after higher education : the diversity of opportunities and obstacles in a changing graduate labour market. In: Cote, E. James and Furlong, Andy, (eds.) Routledge Handbook of the Sociology of Higher Education. Routledge international handbooks . Abingdon, Oxon: Routledge. ISBN 9781138778122

Permanent WRAP URL:

<http://wrap.warwick.ac.uk/80156>

Copyright and reuse:

The Warwick Research Archive Portal (WRAP) makes this work by researchers of the University of Warwick available open access under the following conditions. Copyright © and all moral rights to the version of the paper presented here belong to the individual author(s) and/or other copyright owners. To the extent reasonable and practicable the material made available in WRAP has been checked for eligibility before being made available.

Copies of full items can be used for personal research or study, educational, or not-for-profit purposes without prior permission or charge. Provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page and the content is not changed in any way.

Publisher's statement:

This is an Accepted Manuscript of a book chapter published by Routledge in Routledge Handbook of the Sociology of Higher Education on 2 June 2016, available online:
<https://www.routledge.com/Routledge-Handbook-of-the-Sociology-of-Higher-Education/Cote-Furlong/p/book/9781138778122>

A note on versions:

The version presented here may differ from the published version or, version of record, if you wish to cite this item you are advised to consult the publisher's version. Please see the 'permanent WRAP URL' above for details on accessing the published version and note that access may require a subscription.

For more information, please contact the WRAP Team at: wrap@warwick.ac.uk

Life after higher education: the diversity of opportunities and obstacles in a changing graduate labour market

Kate Purcell and Charoula Tzanakou,

Higher education expansion and career opportunities

From the latter part of the twentieth century and onwards progressively rapid industrial restructuring, technological change and globalization have changed the parameters of employment. Governments' assessments of the skills required for economic growth and development have driven higher education investment and expansion policies in the UK, as they have internationally. Looking across OECD countries, it has recently been estimated that an average of 40 per cent of young adults are likely to complete undergraduate (tertiary Type-A) education during their lifetime, with graduation rates in European countries ranging from half or more in Finland, Iceland, Poland and Russia to less than a quarter in Belgium, Greece, Estonia (OECD, 2014). Higher education (HE) has become a global industry – part of the 'knowledge economy' that it serves – and this is reflected in increasing education-led migration and mobility – both of EU and overseas students to study in UK and of UK students to study overseas.

Change in global/European HE and graduate labour markets

However, the global HE industry is very diverse and making sense of the heterogeneous European higher education systems and graduate labour markets present challenges. In the original European Union countries as a whole (EU-15)ⁱ, the proportion of the population aged 25-34 years old with tertiary level qualifications increased from just over 22 to 38 per cent between 1997 and 2014. At national level, the proportion of tertiary-educated individuals more than doubled in Italy, with virtually similar growth in France, and the UK (Eurostat, online): growth that largely reflects the increased share of women's participation

in higher education in the countries concerned (Eurostat, online¹).

By contrast, the employment rate of recent graduates in EU countries as a whole (EU-27)ⁱⁱ decreased slightly between 2006 (before the economic crisis) and 2013 from 79 per cent to 75.7 per cent. However, Table 1 shows how this average obscures dramatic differences, ranging from Germany, where graduate employment has increased slightly, to Greece, Italy and Spain, where the situation for the graduates has deteriorated dramatically due to the deeper economic downturn in these countries.

Table 1 Comparative proportions of recent graduatesⁱⁱⁱ in employment in 2006 and 2013

	2006	2013
Greece	66.8	40
Italy	66.2	48.3
Spain	82.9	59.9
Portugal	83.1	67.8
EU - 27	79	75.7
France	78.6	76.9
Belgium	81.1	79.1
Finland	79.7	79.8
Denmark	89	81.9
United Kingdom	86.3	83.8
Sweden	83.3	84.9
Netherlands	92.7	87.1
Germany	82.1	89.7

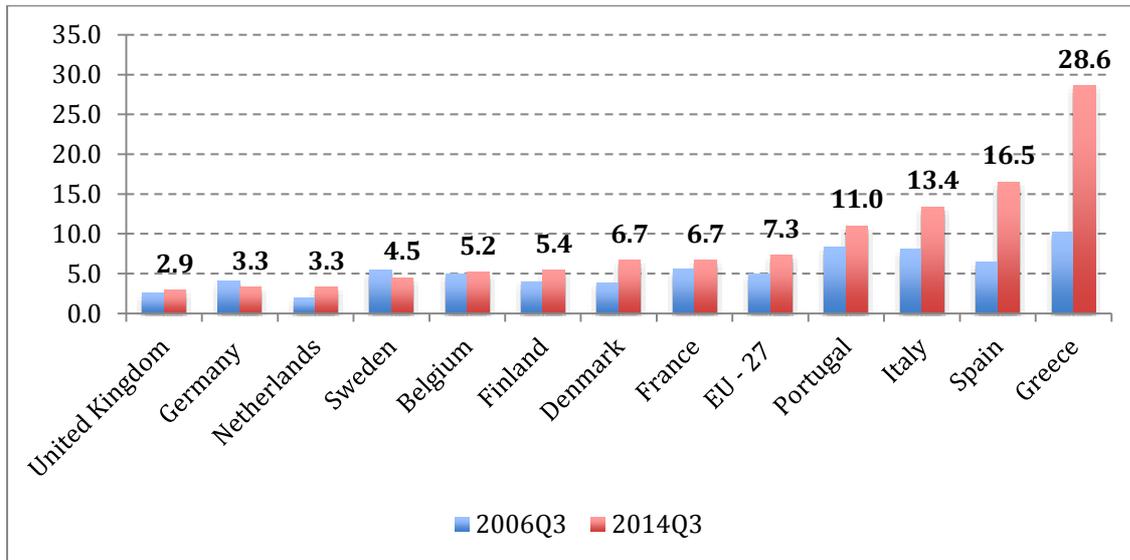
Source: Derived from Eurostat online database (Tertiary levels 5-8), tps00053*

It is widely recognised that these employment rates among graduates mask widespread differences in the extent to which graduates are employed in jobs that require the knowledge and skills they acquired in HE. In 2008-9, one in five graduates in the EU-27 countries reported that the skills required in their current job were lower than their actual skills levels, with the proportions making this claim ranging from less than 10 per cent of

graduates in Czech Republic and Luxemburg to more than 30 per cent in Cyprus, Ireland and Spain (Eurostat & Eurostudent, 2009). In the wake of recession, successive financial crises and continuing increases in the graduate labour supply, the comparable proportions are likely to have risen considerably in most of the countries since then, alongside increased graduate unemployment, which has certainly been the case in the UK (ONS, 2013). As Figure 1 shows, unemployment rates for tertiary education graduates (25-39 years old) reveals the South-North divide even more clearly than the table above, ranging from 2.9 per cent in Germany to 28.6 per cent in Greece. ².

The ages at which young people enter and graduate from HE varies substantially among European countries, which led us to look at this age group rather than the younger stratum (20-24 year olds), for which the graduate population is substantially larger in some countries than others. For this younger group, similar relativities apply but the unemployment rates are much higher. This may be explained to some extent by the fact that younger graduates are, by definition, at an earlier stage of transitions into the labour market, but part of the explanation must be the timing of their labour market entry in relation to the 2008-9 recession and subsequent reduction in demand for labour .

Figure 1 Unemployment rates of 25-29 years old with tertiary education (levels 5-8) % in 3rd quarter of 2006 and 2014



*Source: Derived from Eurostat, online data from **Unemployment rates by sex, age and highest level of education attained (%)**[lfsq_urgaed]], extracted 30.3.2015, Tertiary education (levels 5-8), age: 25-39 years old, third quarter, LFS Series Unemployment*

As these statistics indicate, the European higher education labour market landscape as a whole is by no means homogeneous, and the same is true of the structure and content of HE provision throughout Europe, despite concerted efforts since 1999^{iv} to agree and implement common standards, harmonization of qualifications and transferability of students and employees. Official statistics provide a fairly crude overview of the cross-national comparative relationship between higher education and employment, and it is important to acknowledge the weaknesses and limitations of the data. As Teichler (2000, p.152) has pointed out, the indicators addressed by labour market statistics are limited and do not allow for three crucial areas of analysis: analysis of intersections between labour market outcomes and socioeconomic background, type of course and other socio-demographic variables; exploration of more ‘subjective’ themes which are measured on the basis of individuals’ views (e.g. graduates’ evaluation of the match between the knowledge and skills they have developed and the requirements of their jobs); or the study

of career trajectories, since most statistics provide information on individuals at only one point. Most importantly, the highly-qualified young people included in the ‘graduate’ populations have an enormous range and levels of knowledge and skills that vary both within and across countries. Therefore, the ‘graduate’ supply statistics are profoundly flawed as a presumed unitary indicator, and the demand indicators, as measured by the numbers in employment, are extremely crude and give no indication of the quality or appropriateness of jobs held by those who *had* obtained jobs.

Concern about allegedly increasing graduate under-employment dates back to the last three decades of the 20th century in both UK and Europe (Brennan & Tang, 2008; Teichler, 2000; Dolton & Makepeace, 1992; Tarsh, 1992), accelerating as participation levels have risen, particularly in the wake of the 2008 global recession. In common with virtually all developed and developing countries in recent decades, UK governments since the late 1980s have promoted the expansion of higher education (HE), on the assumption that in an increasingly competitive global economy, sustainable growth increasingly relies on knowledge rather than material resources or productivity *per se* and the key to economic prosperity is the development of a ‘high skills’ economy.

But what is a graduate job?

There is widespread recognition that it has become increasingly important to be able to distinguish and define graduate employment and underemployment (James *et al.* 2013, 2011; Keys-Ryan & Harvey, 2011) and there have been several attempts to create classifications of occupations and, in some cases, of graduate jobs, in order to make sense of the changing occupational structure and the relationship between higher education expansion and

occupational change (Purcell & Elias, 2013; Green & Henseke, 2014; Brown *et al.* 2011; Elias & Purcell, 2004). In this chapter, we use SOC(HE)2010 (Elias & Purcell, 2013) which directly addresses the extent to which knowledge and skills developed in HE are required to carry out the tasks and responsibilities in each occupation. On that basis, all occupations are allocated to one of four categories; Expert, Orchestrator, Communicator and Non-graduate:

- Expert occupations require specialist knowledge and/or skills normally inculcated during an undergraduate degree course (for example pharmacists, civil engineers and secondary school teachers);
- Orchestrator occupations (such as senior managers in government, manufacturing or services organisations) require the competences to draw on their own and others' knowledge to plan, co-ordinate and achieve objectives;
- Communicator occupations require high-level competence in the communication and dissemination of knowledge, using spoken, written, visual or technological communication knowledge and skills (- marketing professionals, graphic designers and media professionals, for example);
- Non-graduate occupations do not require graduate-level knowledge, skills or expertise.

Analysis of recent UK graduate employment trends using this classification has indicated unequivocally that the proportion of employed graduates in non-graduate employment has risen substantially, beyond levels that can be explained by recessionary fluctuations in demand (Purcell & Elias, 2015;ONS, 2013). The questions are, which recent graduates have been most vulnerable to unemployment and underemployment, and which have integrated successfully into appropriate employment?

Although the actual and potential roles of higher education in economic development has been the main driver of education expansion policies, widening access to HE and the reduction of social inequalities has also been at their core, both in terms of individual rights and socio-economic utilities (Wilkinson & Pickett, 2009). Education has long been assumed to be an effective route to social mobility (Tawney, 1931) and in previous generations, being a graduate was taken for granted to enable access to a career rather than simply a job. Since the early 1970s, successive equal opportunities initiatives, underpinned by antidiscrimination legislation and initiatives to facilitate widening access to HE, have made a significant impact on educational and employment opportunities in the UK, as in most OECD countries. Consequently, the majority of young people in the UK and other countries at comparable stages of economic development have grown up in societies where they have been encouraged to regard themselves as able to aspire to any area of education or employment, regardless of gender, ethnicity, disability or any other social or demographic characteristics. However, despite concern to widen access to young people and adults from socially-disadvantaged backgrounds, those traditionally excluded from educational opportunity have proved more difficult to recruit. The expansion of HE has disproportionately benefited those from professional, managerial and intermediate occupational backgrounds with, in the UK, school leavers from professional and managerial backgrounds four times as likely to proceed to HE as those with parents in unskilled occupations (Chowdry *et al.*, 2013). Despite successive government analyses and reports deploring the lack of access of disadvantaged groups to professional employment and initiatives to enable members of these groups to access educational routes to such careers (Macmillan & Vignoles 2013; Milburn, 2012), the evidence clearly indicates that increased access to education does not *in itself* provide a route upward social mobility, as our work and that of several of the authors in this volume have demonstrated.

Considering the expansion of the graduate labour supply, there are consequently two major questions: firstly, how far does participation in HE and acquisition of knowledge and skills on undergraduate courses enable graduates to obtain appropriate employment where these competences are used, and secondly, how far does this extension of opportunities offered within HE reduce or simply reinforce existing socio-economic inequalities? In order to explore these questions, it is necessary to focus increasingly on the direct relationships between the knowledge and skills required to access jobs, the knowledge and skills required to carry them out, and the qualifications and other demographic and educational attributes of those who access these jobs. For most of the remainder of this chapter, we will thus concentrate on the UK graduate labour market^v.

Evidence from the UK labour market

To illustrate the diversity of recent graduate experience, we focus on findings from the Futuretrack longitudinal survey in which students were tracked from the point at which they applied to enter UK HE in 2005-6 until winter 2011-12, when the majority, having graduated in the summers of 2009 and 2010, had entered the labour market. Online surveys were conducted at four stages of the respondents' careers: when they were applicants seeking to enter an undergraduate course in summer 2006, in summer 2007 when most had completed the first year of their courses, in late spring/early summer 2009 (repeated for those on four year degree programmes at the same time in 2010) to investigate final year students' career-related attitudes and decision-making and to maintain contact with those on longer courses or who had taken alternative routes that did not include full-time HE) and in Winter 2011/12, six years on from the Stage 1 survey. By then, the majority of respondents had completed undergraduate courses 18 or 30 months previously. Because detailed data

were collected over a longitudinal period, it is possible to investigate, for each respondent and for the sample as whole, relationships among demographic, educational, experiential and attitudinal variables. It thus facilitates analysis beyond the analysis of the relationship between having a degree and career outcomes to the relationships among different kinds of HE experiences, learning and early career outcomes.

Subject choice and outcomes

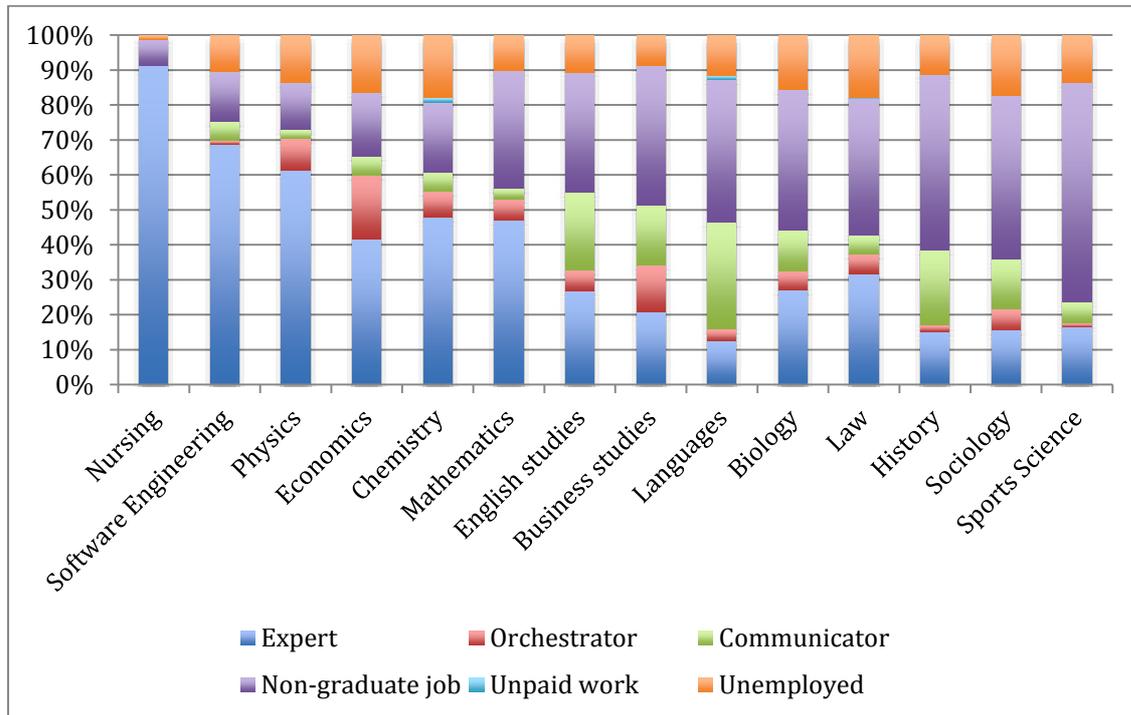
There is not one single graduate labour market, except at the most abstract level, and all degrees do not lead to the same career opportunities. Detailed analysis of the relationship between broad subject of study and early career outcomes revealed significant differences in the propensity to proceed to postgraduate study, to enter graduate level jobs, to be underemployed and to experience unemployment. Broadly speaking, there were positive correlations between successful graduate labour market integration^{vi} and having completed a vocational undergraduate degree or having studied a course with a substantial numeracy-based element (Purcell *et al.*, 2013). The effect of subject studied on current activity type remained significant when controlling for key demographic and socio-economic variables. Nonetheless, within the broad subject/discipline areas, there were substantial differences at disaggregated subject levels, relating to the particular areas of knowledge and skills that had been developed and the characteristics of the undergraduate populations in question. For example, although graduates who had studied Science, Technology, Engineering and Mathematics (STEM) degree subjects had generally been more likely to experience a positive transition from HE to employment than graduates in Arts and Humanities, there were wide variations in the early career transitions of both broad groups. There was also clear evidence of the impact of the recession with increased proportions of graduates finding it harder to

achieve a rapid integration into appropriate occupations compared to the experiences of earlier cohorts of graduates, across the full spectrum of subjects.

Early career outcomes of 2009/10 UK graduates

To illustrate this systematically-patterned diversity of outcomes using the SOC(HE)2010 classification, Figure 2 compares the current situation of selected subject-groups of Futuretrack Stage 4 survey UK-domiciled graduate respondents according to their particular subject of undergraduate study. There were wide variations in the proportions of graduates in expert graduate jobs. The highest proportions employed in Expert graduate jobs were those who had studied Nursing and those from the Engineering sub-groups. The proportions of graduates either unemployed or in non-graduate jobs was much higher for graduates with degrees in Business Studies Languages, Biology, Law, History, Sociology, and in particular, those who had studied Sports Science. The selected degree subject groups in Figure 2 indicate differences between the Physical and Biological sciences as well as between STEM and non-STEM subjects.

Figure 2 Futuretrack graduates' labour market situation Winter 2011/12



Source: Futuretrack Stage 4 UK-domiciled economically active graduate respondents surveyed between 18-30 months after graduation.

As in earlier studies (Elias et al., 1999; Purcell & Elias, 2004), Futuretrack data showed that a significant gender wage gap persists, even among members of this highly-qualified mainly pre-family-building stratum of the workforce, with male graduates earning more than females across all subjects even at the earliest career stages. The largest gender difference was for Law graduates. Women who had studied for a law degree and were in full-time employment at the date of the survey had annual earnings of just over £20,000, compared with their male counterparts earning on average more than £28,000 per annum (Purcell *et al.*, 2013, p.50, Figure 5.5 and ff).

The very detailed longitudinal data collected in the course of the study enables us to focus on those in employment and the jobs that they were doing at a particular early career stage, to assess how far their jobs were appropriate for people with the knowledge and skills they had

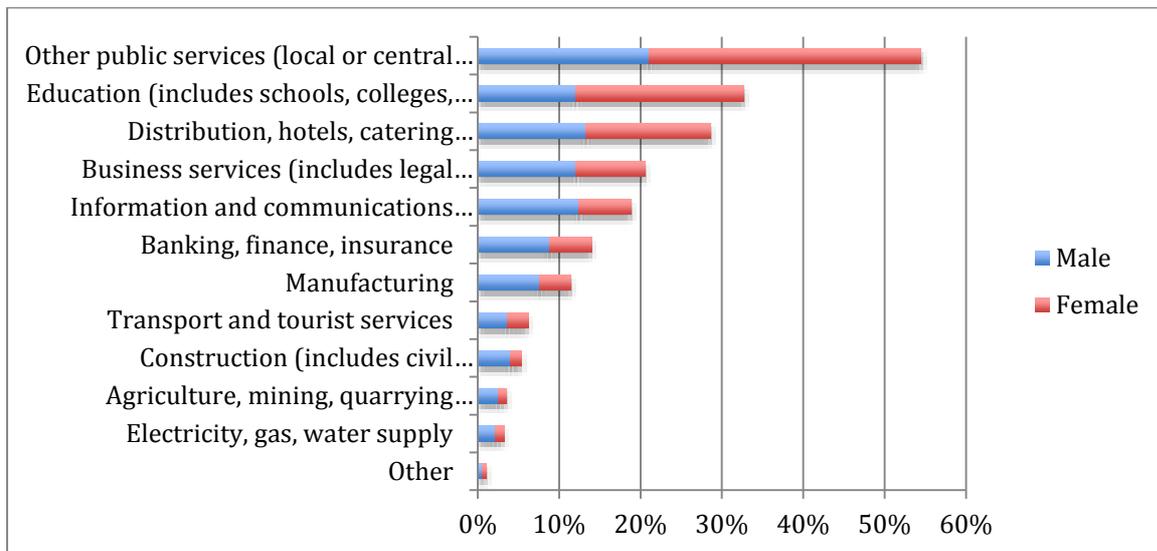
acquired and developed in HE. Analyses so far has covered how far they were using their specialist subject knowledge and specialist and generic skills in the occupational roles in which they were employed, the jobs were they had accessed and their employment contexts (c.f. Purcell *et al.*, 2013:64-95) and analysis of the data continues, but we outline some of the key findings below.

Distribution of graduates across industry sectors and contractual arrangements

In winter 2012/13, approximately 58 per cent of the employed graduates worked in the private sector, 34 per cent in the public sector and 8 per cent in 'not-for-profit' organisations. Over half of graduates in the education, business services, information and communication, local and national government and the construction sectors worked in jobs which were done only, or mainly, by graduates. Two thirds had a permanent or open-ended contract and a further fifth were on a fixed term contract. Eight per cent were agency workers or had temporary or casual work. Overall, 5 per cent were self-employed, but this rose to 18 per cent for graduates from specialist HE colleges such as Art Schools and institutions specialising in offer longer expert and communication courses substantially geared towards preparation for client-focused work.

Figure 3 shows the sectoral distribution of the Futuretrack sample of graduates in employment in Winter 2011/12, showing the gender ratios within each. We can see from this that the women's employment was disproportionately skewed towards public services to a significantly greater extent than that of the men, who were more evenly distributed among the sectors and more likely to be working in manufacturing and private sector services.

Figure 3 Distribution of graduates in employment at the time of survey, showing proportions of males and females in each industry sector



Source: Futuretrack 2006: Stage 4 UK-domiciled graduate respondents in employment (weighted).

This Futuretrack gender distribution of employed graduates is remarkably similar to the distribution of males and females found for the Class of '99 respondents (Purcell et al., 2005, p.15, Figure 2.9) in both the different gender divisions of labour contexts and, by and large, the distribution of proportions of male and female graduate populations among the sectors. The two samples are not strictly comparable but they are likely to be indicative of the direction of change in the structure of employment opportunities in the intervening period, so it is worth considering the similarities and differences between them. The biggest changes are:

- the virtual tripling of the proportions of both males and females employed in Distribution, hotels and catering, from less than 5 per cent of both in the case of 1999 graduates 3-4 years after graduation to 13 per cent of males and 15 per cent of female graduates in the Futuretrack sample;
- increases in the proportions of males employed in the Information and Communication sector;
- a substantial decline in the proportions of both males and females in Banking;

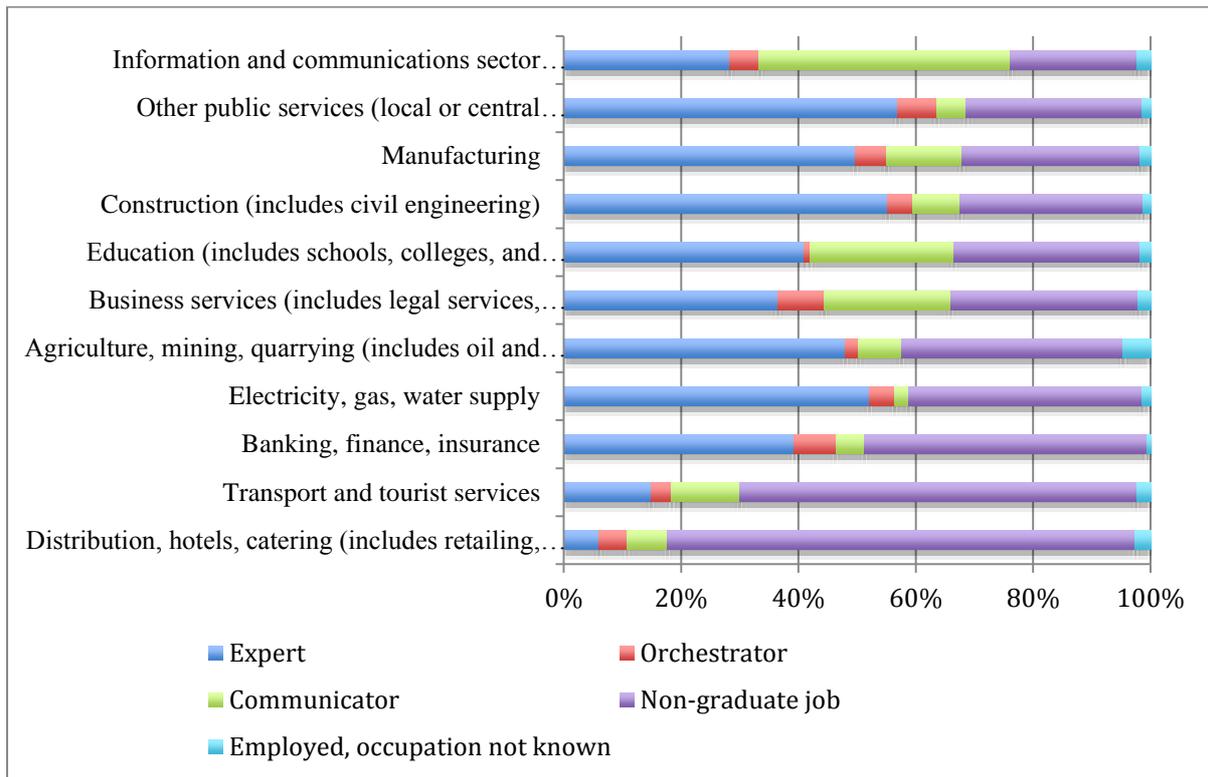
- a 50 per cent reduction in the proportion of males employed in Construction.

The question is, how far do these changes relate to (potentially temporary) recession-based changes in demand in the industries for both graduate and non-graduate labour and how far are they indicative of longer-term reductions in demand for graduates?

To investigate this further, Figure 4 shows the SOC (HE) 2010 distribution of the Futuretrack graduates in each broad industry sector. It reveals very different patterns of employment.

The two sectors employing the largest number of graduates, public services and education, had the largest proportions of graduates in jobs where their HE-acquired knowledge and skills were likely to be required and used. However, in the third largest area of concentration, Distribution, retail and hospitality, most of the recently-graduated employees were in unequivocally non-graduate jobs: sales assistants and routine catering assistants. We see that the Expert jobs are concentrated in public services, including healthcare, education, business services, banking and finance, and in manufacturing and in some of the smaller sectors of graduate employment: agriculture, construction and utilities. As might be expected, the smaller number of graduates in Orchestrator posts were more often found in business services, banking, finance & insurance or 'other public services' that include central and local government, and government agencies and other public sector agencies. Communicator jobs were the largest component of the young graduate workforce in ICT and also were found in substantial numbers in education and in business services (mainly in advertising, public relations and technical roles). All of these patterns make sense. We clearly see, though, evidence of one of our main findings: graduate employment in non-graduate jobs was extensive across the full industry sector spectrum.

Figure 4 Industry sector of current main employer by SOC (HE) 2010



Source: Futuretrack 2006: Combined Stages 1-4 dataset; Stage 4 UK-domiciled graduates; data (weighted).

It is not surprising that graduates of all subject groups were more likely to report that they were using their undergraduate course skills in their current job than that they were using their subject knowledge. Graduates with degrees in STEM and vocational subjects were the most likely to believe that their subject had been an advantage in looking for employment while graduates in arts subjects were the least likely to have done so. Around three quarters of graduates thought they possessed the skills employers were looking for when recruiting for the types of jobs they wanted and surprisingly, given the propensity of respondents to be in non-graduate employment, just over three fifths believed they were using these skills in their jobs. Similarly graduates in STEM and vocational subjects were the most likely to believe that the skills developed during their course had made them more employable, which has been largely borne out by the outcomes analyses.

Socio-economic background

It is a core theme of this book that social and educational advantage and disadvantage impact substantially on educational opportunities, access to HE and the learning and social experiences of students during their courses. Throughout the stages of the longitudinal study it was apparent that students from socially and educationally-disadvantaged backgrounds had access to less careers guidance and information, were less likely to apply to enter HE with high entry qualifications, less likely to apply to study the subjects most likely to lead to employment in the most highly-rewarded established professions, and were less likely to apply to or gain places in the most prestigious universities. While studying, they were more likely to study at their local universities, to live at home and to do paid work both during vacations and during term-time, and to work in paid work unrelated to their courses for longer average hours than their peers from professional and managerial backgrounds. They were less likely to have participated in extra-curricular activities or held posts of responsibilities related to such activities. Over 80 per cent of graduates from higher managerial or professional backgrounds but only two thirds of those from a routine and manual background reported participating in extra-curricular activities.

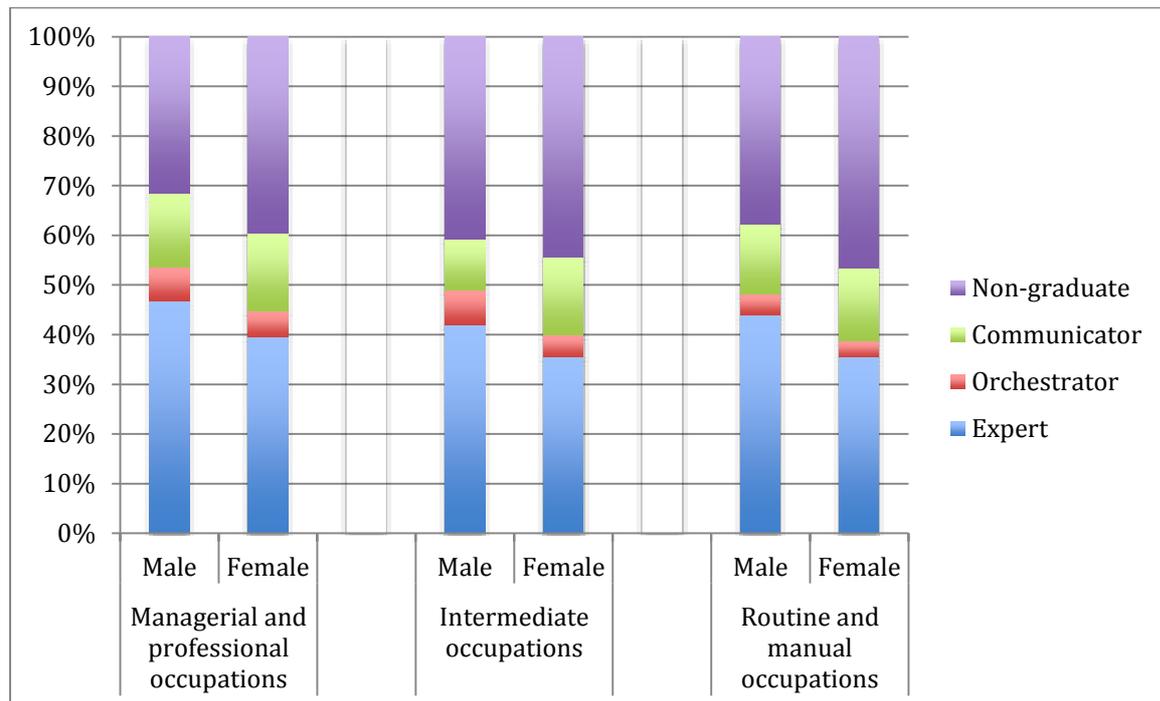
The Futuretrack findings revealed that those students who had extra-curricular or office-holder experiences in HE were more likely than others to be in a graduate job, which is indicative of the added-value of having been able to take advantage of these wider advantages of HE participation in these. Consequently, the lower proportions of graduates from a routine and manual background who had done so, not unrelated to the longer hours they worked, on average, in paid work undertaken ‘just for the money’ rather than any career-related objectives, demonstrates the extent to which constraints on ability to make full use of HE experiences can further reinforce disadvantage. In general, those attending the most *elite*

universities, disproportionately accessed by students from relatively socially advantaged backgrounds, had access to more and better resources and extra-curricular opportunities. This added to advantage conferred by studying at an *elite*-brand institution from which traditional graduate employers actively seek to recruit. Based on the multivariate analyses of the Futuretrack data it was found that type of HEI, subject studied, access to social networks that facilitate labour market entry (- generally but not exclusively linked to socio-economic background and achievement) may be more important than socio-economic background *per se*.

Graduates from socially-advantaged backgrounds were more likely to have gone on to study for a postgraduate qualification (Ellison and Purcell, 2015) which increased the likelihood of being in a graduate occupation and to be in a job that was wholly or mainly done by graduates. It was clear that some graduates had more career route options than others, depending on whether they could afford to spend time in unpaid work experience or felt able to wait for an appropriate vacancy, felt forced to take whatever job they could or to choose or have no option but to be unemployed.

In Winter 2011-12, between 18 and 30 months after they had completed their HE courses, there was little difference according to socio-economic background in the likelihood of graduates being unemployed, but those from professional and managerial backgrounds were significantly less likely than those from relatively disadvantaged backgrounds to be in non-graduate jobs (25 per cent, compared to 33 per cent). Figure 5 compares the current occupational distributions of male and female respondents in employment according to their socio-economic backgrounds prior to embarking on their undergraduate studies.

Figure 5 Graduate occupational outcomes (SOC (HE) 2010) according to gender and broad socio-economic background



These differences, although relatively small, suggest that graduates from ‘traditional student’ relatively socially advantaged backgrounds, with greater likelihood of having access to information about HE and career options, were more likely than their less advantaged peers to be in appropriate employment for someone with their educational backgrounds, but that gender may be a greater handicap than socio-economic background.

Conclusion

At the start of this chapter, we examined HE participation trends in Europe and discussed the ‘knowledge-economy thesis’ basis of the government and EU policies that promoted increased HE participation and widening access to HE. These resulted in very significant expansion of HE and resulting change in the dynamics between graduate labour market supply and demand in the majority of European countries and in Europe as a whole. It is clear

that, along with increased graduate employment, graduate unemployment and under-employment also grew rapidly, particularly over the last ten years.

Arguing for the need for much more careful investigation and analysis of the relationship between higher education and labour market change – in particular, between the knowledge and skills developed in universities and colleges and the knowledge and skills used and required in contemporary economies, we focused on recent UK graduates to try to unpack the two heterogeneous concepts of ‘graduates’ and ‘graduate jobs’.

Our first concern was to provide a clearer indication of the extent and distribution of graduate unemployment and under-employment, and the variables associated with more or less successful graduate labour market integration. Drawing on findings from the Futuretrack longitudinal survey of 2009 and 2010 graduates and using the SOC (HE) 2010 occupation classification, we demonstrated the extent to which respondents’ early career outcomes were related to the subjects they had studied, the types of universities they had attended, their gender and their socio-economic backgrounds. Their sectoral distribution showed clearly where there has been recent demand for graduate knowledge and higher-level skills, and where they were likely to be under-employed and possibly displacing less well-qualified applicants for such jobs. Overall, graduate employment in non-graduate jobs was extensive across the full industry sector spectrum and greater than had been found in analyses of the outcomes of previous comparable cohorts.

Considering the extent to which recent UK HE expansion has reduced or reinforced socio-economic inequalities, it was shown that access to higher education is not automatically linked to upward social mobility. Social inequalities are reproduced through the choice of

subject, type of higher education institution attended and the capacity to access the full range of educational and extra-curricular activities and work experience activities during undergraduate study. The Futuretrack study showed how important access to information and guidance had been prior to HE entry in separating the well-informed from the less well-informed consumers of HE. Subsequently, the choices that they made appear to have resulted to a substantial extent in carrying social advantage and disadvantage through the HE experience and into the increasingly competitive graduate labour market. It is nevertheless the case that those with degrees remain less likely to be unemployed than those without degrees, in the UK at least, but the increasing fragmentation of occupations that has led to a move away from secure full-time employment with predictable hours of work and incomes makes individual investment in HE both more necessary and a less reliable guarantee of future career success.

References

- Ainley, P., & Corbett, J., 1994. From Vocationalism to Enterprise: social and life skills become personal and transferable. *British Journal of Sociology of Education*, 15(3), 365-374.
- Avveduto, S., & Pisacane, L. (Eds.). 2014. *Portrait of a Lady: Women in Science: Participation Issues and Perspectives in a Globalized Research System*. Gangemi Editore Spa.
- Chowdry, H., C.Crawford, L. Dearden, A. Goodmann and A.Vignoles, 2013. Widening participation in higher education: analysis using linked administrative data. *Journal of the Royal Statistical Society: Series A*. 176 (2) , 431–457.
- Boden, R. and M. Nedeva. 2010. Employing discourse: universities and graduate employability. *Journal of Education Policy*, 25: 37-54.
- Brennan, J. and W. Tang. 2008. *The employment of UK graduates: a comparison with Europe*. Report to HEFCE by Centre for Higher Education Research and Information, The Open University.
http://www.open.ac.uk/cheri/documents/reflex_report_1.pdf
- Brown, P., Lauder, H. and Ashton, D.,2011. *The Global Auction*. Oxford: Oxford University Press.

- Dolton, P. J., & Makepeace, G., 1992. *The early careers of 1980 graduates: Work histories, job tenure, career mobility and occupational choice*. Department of Employment, Research Paper 79.
- Elias, P. and K. Purcell, 2013. Classifying graduate occupations for the knowledge economy. Futuretrack Working Paper No.5. Coventry: Warwick University IER and Manchester: HECSU
- Elias, P. and Purcell, K., 2013b. The earnings of graduates: reviewing the evidence from Futuretrack. Futuretrack Working Paper No. 5, Institute for Employment Research, University of Warwick.
- Elias, P., K. Purcell, A. McKnight and J. Pitcher, 1999. *Moving On: graduate careers three years after graduation*. Manchester: Higher Education Careers Services Unit.
- Ellison, R. and K. Purcell, 2015. *Widening Access to Postgraduate Study and the Professions: addressing the research questions via Futuretrack data analysis*. Report to the Higher Education Funding Council for England, January.
- European Commission/EACEA/Eurydice, 2014. *Modernisation of Higher Education in Europe: Access, Retention and Employability 2014* . Eurydice Report. Luxembourg: Publications Office of the European Union.
- European Commission, 2010. Communication from the Commission on 'Europe 2020: A strategy for smart, sustainable and inclusive growth' . COM (2010) 2020 final.
- European Commission, 2011. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on 'Supporting growth and jobs – an agenda for the modernisation of Europe's higher education systems' . COM(2011) 567 final.
- Eurostat & Eurostudent. 2009. *The Bologna Process in higher education in Europe: Key indicators on the social dimension and mobility*. Luxembourg: EU Publications office
- Figueiredo, H., Rocha, V., Biscaia, R., & Teixeira, P., 2015. Gender pay gaps and the restructuring of graduate labour markets in Southern Europe. *Cambridge Journal of Economics*, 39, 565–598.
- Green, F. and Henseke, G. (2014) *The Changing Graduate Labour Market: Analysis Using a New Indicator of Graduate Jobs*, published by the Centre for Learning and Life Chances in Knowledge Economies and Societies.
- Keep, E., and J. Payne. 2004. 'I can't believe it's not skill': The changing meaning of skill in the UK context and some implications. In *Balancing the skills equation: Key issues and challenges for policy and practice*, ed. G. Hayward and S. James. Bristol: The Policy Press
- James, S., C. Warhurst, G. Tholen and J. Commander, 2013. What we know and what we need to know about graduate skills. *Work, Employment and Society*, 27(6), 952-963
- Macmillan, L. and Vignoles, A., 2013. *Mapping the occupational destinations of new graduates*. Social Mobility and Child Poverty Commission
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/259380/Mapping_the_occupational_destinations_of_new_graduates_Final.pdf

- McQuaid, R. W., & Lindsay, C., 2005. The concept of employability. *Urban studies*, 42(2), 197-219.
- Milburn, A., 2012. *University Challenge: How higher education can advance social mobility. A progress report by the Independent Reviewer on Social Mobility and Child Poverty*. Cabinet Office
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/80188/Higher-Education.pdf
- OECD, 2014. *Education at a Glance 2014: OECD Indicators*, OECD Publishing, Paris. DOI: <http://dx.doi.org/10.1787/eag-2014-en>
- O'Reilly, J., Smith, M., Deakin, S., & Burchell, B., 2015. Equal Pay as a Moving Target: International perspectives on forty-years of addressing the gender pay gap. *Cambridge Journal of Economics*, 39(2), 299-317.
- Purcell, K., Elias, P., Atfield, G., Behle, H., Ellison, R, Luchinskaya, D., 2013. *Transitions into employment, further study and other outcomes, The Futuretrack Stage 4 Report*, Manchester: HECSU and Coventry: Warwick Institute for Employment Research.
- Purcell, K. and P. Elias, 2015. (forthcoming) Graduates and graduate jobs: what's happening in the UK labour market? Under review for *Work, Employment and Society* publication.
- Reich, R.,1991. *The Work of Nations*, Vintage Books, New York.
- Tarsh, J.,1992. Higher education and changing employment patterns in the United Kingdom', in OECD Report *From Higher Education to Employment*, Vol. IV, Paris: OECD.
- Tawney, R.,1931. *Equality*. London, Allen and Unwin.
- Yorke, M., 2006. *Employability in higher education: what it is – what it is not*. Learning and Employability Series 1. York, The Higher Education Academy (HE)

ⁱ EU-15: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden and the United Kingdom

ⁱⁱ EU-27 is comprised of Austria, Belgium, Bulgaria, Republic of Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the UK.

ⁱⁱⁱ The indicator ‘employment rates of recent graduates’ presents the employment rates of persons aged 20 to 34 fulfilling the following conditions according to Eurostat: first, being employed according to the ILO definition, second, having attained at least upper secondary education (ISCED 3) as the highest level of education, third, not having received any education or training in the four weeks preceding the survey and four, having successfully completed their highest educational attainment 1, 2 or 3 years before the survey. The indicator is calculated based on data from the EU Labour Force Survey.

^{iv} Following an initial meeting ‘The Bologna Process’ started in 1999 where 29 Ministers of Education from European committed to undertake reforms aiming at establishing a ‘European Higher Education Area’ (EHEA) by 2010, which will facilitate student mobility and connect national higher education systems through the introduction of tools for better understanding and recognition of higher education qualifications across Europe

^v Futuretrack is independent, interdisciplinary policy-related research on the relationship between higher education, career decision-making and labour market trends, conducted by a research team at the Institute for Employment Research, funded by the Higher Education Careers Services Unit (HECSU). For full details of the survey, including PDFs of the online questionnaires used at each stage and copies of reports, working papers and other publications, see <http://warwick.ac.uk/futuretrack>

^{vi} By which we mean, being employed in an appropriate job for someone with undergraduate degree-level qualifications, knowledge and skills.