Teaching and Research in English Higher Education: New divisions of labour and changing perspectives on core academic roles

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1. Introduction

The UK higher education (HE) system has undergone dramatic changes between the surveys of academics in England in 1992 (supported by the Carnegie Foundation for the Advancement of Teaching) and those throughout the United Kingdom (UK) for the *Changing Academic Profession* (CAP) study in 2007. The formal binary divide between universities and the larger non-university institutions (polytechnics) was abolished in 1992, and further eroded in England in 2004, with the loosening of the criteria for award of the title, so that new 'universities' no longer require research degree awarding powers. There has been a huge (86%)[1] expansion in the number of students entering higher education, and especially those studying part-time and at postgraduate level, and international students. A significant emphasis has been placed on widening participation to those parts of the population that have tended not to consider HE study, but to limited apparent effect (NAO, 2008). In parallel, but at a slower rate due to the relative decline in public funding of HE in the UK, the number of academic staff has grown from approximately 100,000 (Fulton, 1996) to nearly 170,000 (HESA, 2008a).

Since 1992, the external evaluation of the core activities of teaching and research has intensified and been co-opted for government purposes in the steering of HE institutions (HEIs) towards diversity of purpose while maintaining quality standards. A 'third stream' of funding has been established in order to encourage HEIs in their efforts to reach out to businesses and the community and disseminate the knowledge they generate more widely than via the students they graduate. Finally, since 1997,

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[1] 1991/92: 1,267,900 (Connor et al, 1996 using previously unpublished Government data; 2006/07: 2,362,815 (HESA, 2008b)

devolution of power to the four constituent nations of the UK – Scotland, Wales and Northern Ireland, as well as England – has progressed at a different pace in each, leading to (and, in some respects, strengthening) some significant differences in educational policies and practices.

So, it is timely to compare the findings from the surveys in 1992 and 2007 on the nature of academic roles in the UK and the ways they are changing, and how academics view the profession after a period of turbulence. This paper focuses on the findings from an analysis of the responses to an online survey of nearly 1,700 academics from a wide range of HEIs throughout the UK which was carried out by the Centre for Higher Education Research and Information (CHERI) at The Open University. The responses have been weighted to produce a representative sample of 800 from HEIs across the UK. The paper includes comparisons with data from the 1992 paper-based survey of 1,400 academics in England as part of the first International Survey of the Academic Profession (Fulton, 1996). Therefore, the paper concentrates on the responses to the 2007 survey from those employed in HEIs in England.

The CAP questionnaire repeated 13 items from the earlier survey. The comparison allows us to explore the changes in English HE as they are reflected in responses on: the amount of time the respondents spent on different activities; academics' primary interests in teaching and research; their affiliations to their subject, department and institution; their satisfaction with their jobs and views on the attractiveness of the profession; their opinions on teaching; their views on research, their scholarly contributions and sources of research funding; and the evaluation of teaching, research and service activities. For the purposes of this paper, we have analysed the data according to a range of factors (gender, age, time in the profession, grade, academic discipline and type of institution) and focused on the results where there is a significant correlation. First, however, we identify some of the key characteristics of the UK academic profession in relation to teaching and research.

2. The UK academic profession and teaching and research: key characteristics

Universities are organisationally autonomous from the national governments of England, Scotland, Wales and Northern Ireland – the four constituent nations of the UK. They are free to employ and dismiss academic staff, set salaries, decide on academic structure and course content, spend their budgets to achieve their objectives and own and dispose of their buildings and equipment. Within certain parameters, they can decide on the size of student enrolment and borrow money. In England, from 2006, HEIs were able to decide on the level of tuition fees for full-time undergraduate home and European Union (EU) students up to a maximum 'cap'. Tuition fees for part-time, postgraduate and international (non-EU) students are not regulated. However, despite this relative autonomy and falling levels of public expenditure per student, the governments of the UK still exercise a considerable degree of influence over HEIs, through the allocation of funding and the conditions attached to this, and the regulation and evaluation of their activities. A series of intermediary bodies,

such as funding councils, research councils, the Quality Assurance Agency, the Office of the Independent Adjudicator and the Office for Fair Access – as well as the relevant government department or ministry – attempt to steer institutions in the direction of the administration's policies, although these policies are not always consistent with each other and can suddenly take a different course (Locke, 2008a). Of course, some aspects of HE are clearly the subject of legislation and, for our purposes, the abolition of tenure in universities[2] in 1988 is a clear example of government influence.

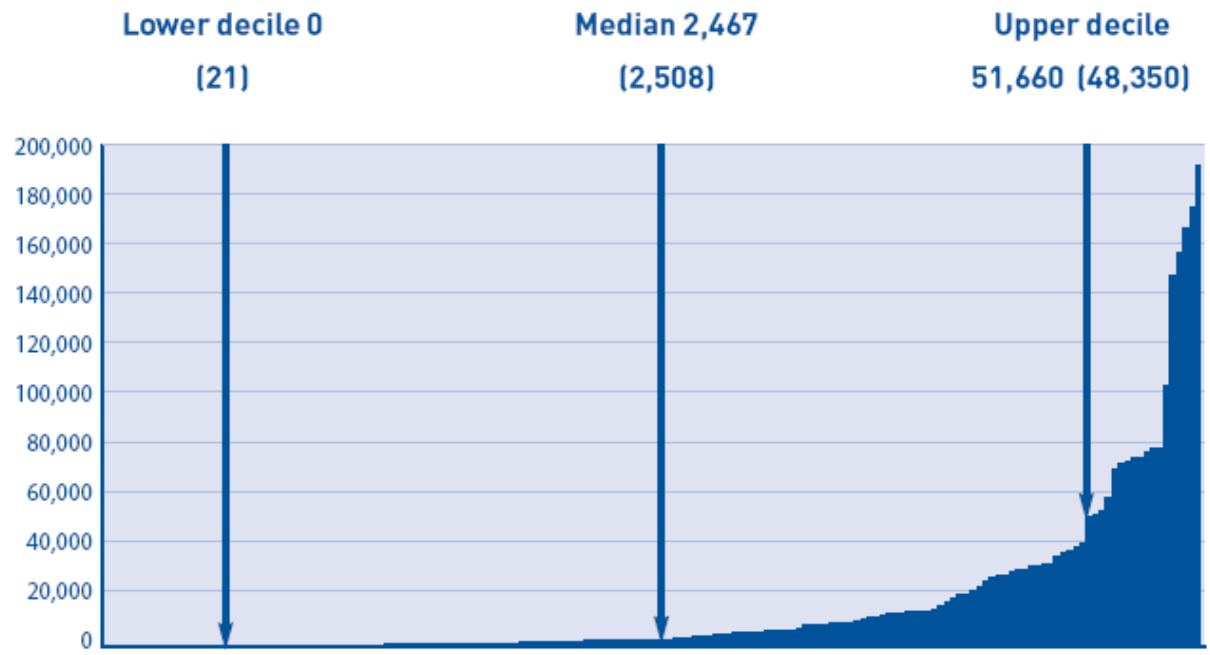
HEIs in the UK are highly differentiated by institutional origin, status, mission, historical wealth, resources, research activity and income, educational provision and student characteristics. This differentiation influences how changes impact on individual HEIs and how much autonomy they can exercise in addressing government policy, the various markets they operate in and other drivers such as demography, technology and environmental change. For heuristic purposes, we have distinguished five types of HEI: research intensive (Russell Group) universities, other pre-1992 universities, post-1992 universities, post-2004 universities and HE colleges[3]. Analysis of the survey data reveals differences that are strongly consistent with this categorisation: HEI-type is more significantly correlated with differences in responses to the questionnaire than any other factor, including gender, age, subject, grade, and mode of employment.

University success and prestige are still largely associated with research – even for those post-1992 universities who have sought to prove their new credentials (Locke, 2004). However, the vertical differentiation of institutions has endured. For example, Figure 1 shows the distribution of the public funding of research, demonstrating its concentration in a small number of higher education institutions, each one represented by a bar. Figure 2 shows the relationship between public research income and all income generated by each institution.

[2] Academics working in polytechnics did not have tenure. However, there is some debate about whether tenure remained in practice, given universities' reluctance to make compulsory redundancies (Fulton and Holland, 2001).

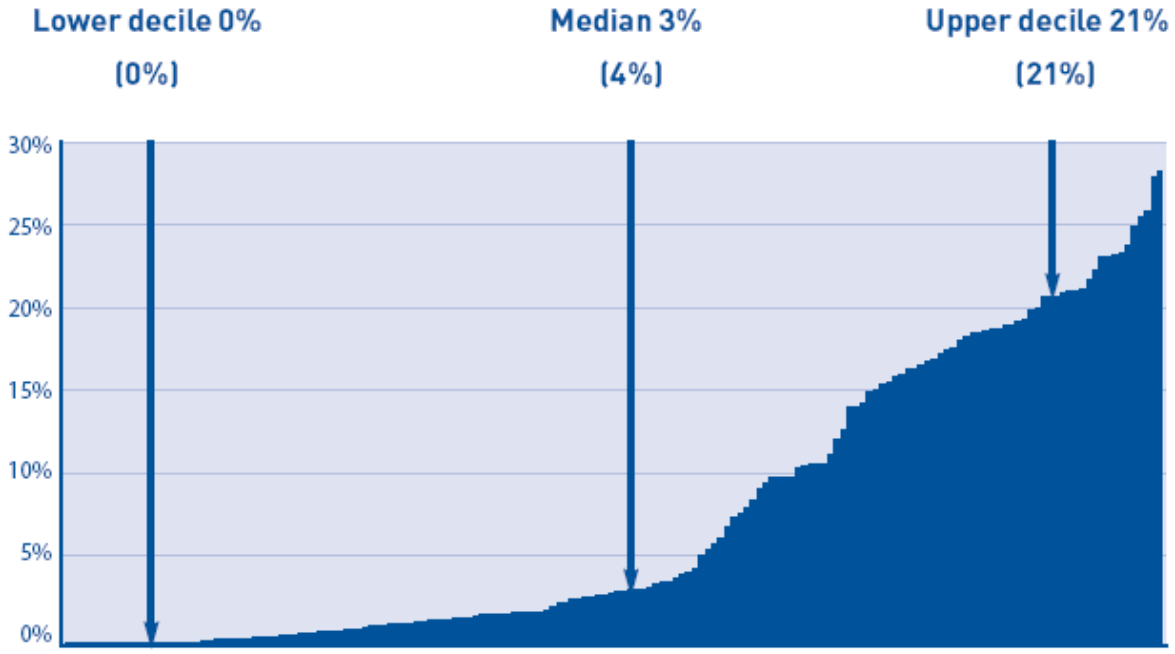
[3] However, we remain open to identifying different patterns of institution through further analysis of the CAP UK data.

Figure 1. Public funding of research (£1,000) in the UK, by Institution, 2006/07



(from Universities UK, 2008, p44)

Figure 2. Public funding of research in the UK as a percentage of all income, by Institution, 2006/07

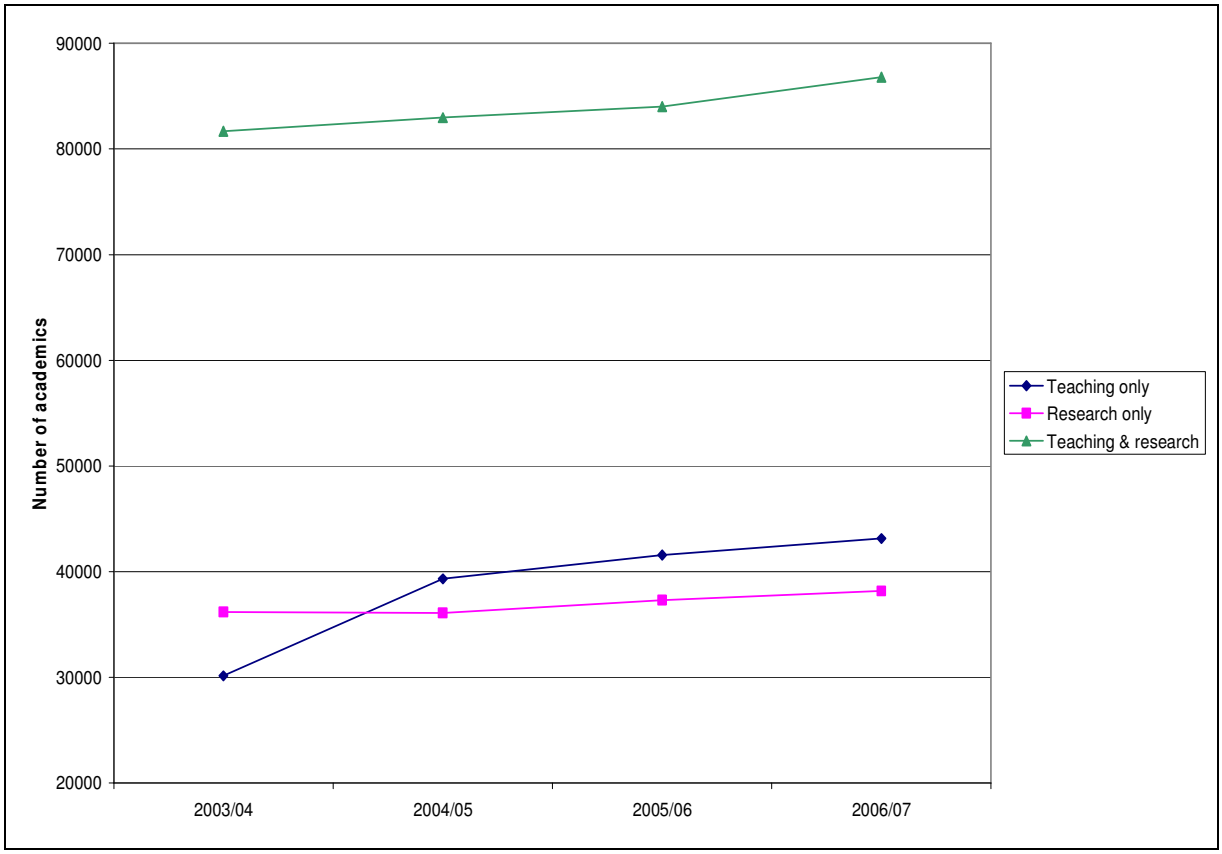


(from Universities UK, 2008, p45)

There is a steep gradient above the upper decile. The extent of concentration of research funding is demonstrated by the fact that the overall ratio of public research income to overall income is 13 per cent and the median institution receives just three per cent of its income from public research funds – and this has decreased from four per cent in 2005/06 (Universities UK, 2008).

This concentration of research funding has led to an increasing number of individuals, academic departments and even universities effectively becoming teaching-only or, at least, 'research inactive'. At the same time, the number of research-only academics has increased, though at a slower pace, and the vast majority of these are on fixed-term contracts associated with specific research projects. Figure 3 illustrates that those academics on contracts that require them to teach *and* research represent little more than half of the total population. Table 1 summarises the main characteristics of UK academics.

Figure 3. Types of academic contract in UK HEIs: trends 2003-2007



(data extracted from HESA, 2008a)

Table 1. Profile of academic staff in the UK, 2006/07

	Full-time	Part-time	Total
All academic staff	113,685	56,310	169,995
By gender			
Female	58%	42%	42%
Male	73%	28%	58%
By grade			
Professors	90%	10%	10%
Senior lecturers & researchers	86%	14%	20%
Researchers	60%	40%	31%
Lecturers	84%	16%	22%
Other grades	25%	75%	18%
By age			
30 & under			15%
31-40			28%
41-50			28%
51+			29%
Terms of employment			
Permanent	72%	28%	62%
Fixed term	44%	56%	38%

(data extracted from HESA, 2008a)

3. Findings from the 1992 and 2007 surveys

Academic Work: the balance of activities and interests

Between 1992 and 2007, responses to the two surveys suggest that the median number of hours academics spend teaching has decreased, as has the time spent on administrative work (Table 2). This may be the result of more accurate recording as much as an *actual* decrease in time spent on these activities. Increasingly, academics in England are being required to complete time allocation schedules in an attempt to provide their institutions with more information about the costs of different activities. This has meant that individuals are far more aware of how they spend, and account for, their time. Also, activities which may have been incorporated in a broad notion of 'Teaching' in 1992 may now be disaggregated and included in the categories of 'Service' or 'Other academic activities' which have seen a rise in the 2007 survey. Time spent on 'Research' has also increased since 1992 which reflects the growing pressure on academics to produce high quality research outputs suitable for submission to the periodic UK Research Assessment Exercise. It also follows an

increase in the number of research-only staff employed since 1992 and a growing emphasis on research for career progression in, and between, institutions.

Table 2. Median Hours per week on teaching, research, service, administration and other academic activities, In Session and Not in Session, 1992/2007

	1992		**2007**	
	In Session	Not in Session	In Session	Not in Session
Teaching	20	5	15	6
Research	10	20	10	25
Service	2	2	4	4
Administration	8	5	5	5
Other	2	3	4	5

Given the increase in the number of hours spent on research, it is unsurprising that the proportion of academics claiming a primary interest in research has increased (Table 3), while those stating a primary interest in teaching or in both teaching and research has decreased in the 2007 survey.

Table 3. Primary Interest (%), 1992/2007

	1992	**2007**
Primarily in teaching	12	11
In both, but leaning towards teaching	32	28
In both, but leaning towards research	40	37
Primarily in Research	15	24

Table 4. Primary Interest (%), by Age, 2007

	30 & Under (32)[4]	**31-40** (155)	**41-50** (167)	**51+** (198)	**Total** (552)
Primarily in teaching	6	7	7	18	11
In both, but leaning towards teaching	16	10	47	32	38
In both, but leaning towards research	16	50	29	37	37
Primarily in Research	63	34	17	13	24

The high percentage (63%) of under 30s interested primarily in research reflects the predominance of contract researchers in the early stages of an academic career in the UK. 71% of

[4] The figures in this row (and in subsequent tables) represent a proportion of the responses from the UK weighted 800 (but England only), and not the actual numbers of individual responses to the questions.

respondents in the category '30 and under' and on fixed term contracts stated they were primarily interested in research. There were no academics on fixed term contracts in the age category '30 or under' who stated they were primarily interested in teaching. This reflects the structure of the academic profession and the common pathways to career progression. Again, this is reflected in the high percentage (50%) of 31-40 year old academics who regard their primary interest to be in both but leaning towards research. By mid-career, respondents are more evenly spread across the four options.

Table 5. Primary Interest (%), by Institution Type, 2007

	Research Intensive Univ. (193)	**Other Pre-1992 Univ.** (249)	**Post-1992 Univ.** (99)	**Post-2004 Univ.** (19)	**HE Colleges** (7)	**All** (569)
Primarily in teaching	3	11	16	60	14	11
In both, but leaning towards teaching	23	31	34	16	43	38
In both, but leaning towards research	36	38	40	21	43	37
Primarily in Research	39	20	10	5	0	24

39% of academics from research intensive universities are primarily interested in research whilst only 3% are primarily interested in teaching. Institutions that have more recently become universities have a lower percentage of academics stating their primary interest in research. Although only small numbers of academics from HE colleges answered this question, it is still surprising to see so few stating teaching as their primary interest. It would be interesting to investigate the thinking that lies behind these responses so that we can develop a clearer understanding of what academics within these different institutions regard as research and teaching, how they conceive of these activities and the relations between them.

There are also differences between academic disciplines. 21% of academics currently employed in the field of education and 22% of academics working in design, creative and performing arts state a primary interest in teaching, whilst only 7% and 8% respectively are primarily concerned with research. Only 8% of academics currently working in engineering and technology departments state a primary interest in teaching compared with 44% who regard research as their primary interest. This is quite different to the picture portrayed in the 1992 survey when 18% of academics stated a primary interest in teaching and 8% a primary interest in research. The majority of academics (74%) working in this discipline in 1992 suggested an interest in both areas of academic work.

Affiliation

Table 6 presents the results given to survey questions on affiliation. Interestingly, in both 1992 and 2007, academics appear far more affiliated to their academic discipline and department than to their institution. The findings presented in Table 6 somewhat contradict previous research that suggests a decline in academics' commitment to their institution (e.g. Bryson, 2004). Although the figures for 1992 and 2007 are not directly comparable due to slight differences in the scales used in the UK CAP questionnaire, there has clearly been no decline in the percentage of academics who are affiliated to their academic discipline, department or institution. If the 2007 responses for 'Essential' and 'Very Important' are combined and compared with those for 'Very Important' in 1992, the percentage has increased since the first survey by 18%. In support of this finding, the figures for 'Not at all Important' and the next response in each questionnaire ('Not Too Important' in 1992 and 'Useful but not that Important' in 2007) have dropped by 11% in the CAP survey. So, all three institutional levels now appear to be more significant in the working lives of academics.

Table 6. Affiliation (%), 1992/2007

	1992				**2007**		
	Academic Discipline	**Depart-ment**	**Institution**		**Academic Discipline**	**Depart-ment**	**Institution**
				Essential	41	17	10
Very Important	64	40	18	Very Important	41	40	26
Fairly Important	29	44	46	Quite Important	12	26	39
Not Too Important	6	13	28	Useful but not that Important	6	11	19
Not at All Important	1	4	8	Not at all Important	1	6	6

Academics from research intensive (42%) and other pre-1992 (37%) universities appear to affiliate more to their institution than those working in post-1992 (27%) or post-2004 universities (27%) (Table 7). Academics working in Post-2004 Universities appear far less affiliated to their institution than those in other types of HEI. These findings may reflect the internalisation of market-based valuations of HEIs, as expressed by the media in university rankings or 'league tables' (Locke *et al*, 2008).

Interestingly, younger, less experienced academics feel far less affiliated to their departments (41%). This may be because the majority (69%) are on fixed term contracts (and many of these research-only) and are less likely to be engaged in departmental decision-making (Bryson, 2004). Of these, only 28% claim that their department is essential or very important. 48% believe it is useful but not that important or not important at all.

A high proportion of academics working in the field of design, creative and performing arts feel little or no affiliation to their institutions (38%) or department (36%). However, 79% felt an affiliation to their discipline, with 50% describing their academic discipline as essential. 80% of academics working in the field of architecture and planning felt little or no affiliation to their institution, yet 95% felt an affiliation to their institution and academic discipline. 86% of academics working in engineering and technology departments state some affiliation towards their institution whilst only 21% of academics working in biological, mathematical and physical sciences describe their institution as essential.

Table 7. Affiliation by Institution Type (%), 2007

		Research Intensive Univ. 189	**Other Pre-1992 Univ.** 254	**Post-1992 Univ.** 99	**Post-2004 Univ.** 26	**HE Colleges** 10	**All**
Academic Discipline	Essential/ Very Important	84	81	85	47	88	82
	Quite Important	7	12	11	27	0	12
	Not too/Not at all important	6	6	4	27	11	7
Department	Essential/ Very Important	55	56	59	58	60	57
	Quite Important	25	27	29	15	10	26
	Not too/Not at all important	20	17	11	27	30	17
Institution	Essential/ Very Important	42	37	27	27	50	36
	Quite Important	41	38	39	38	20	39
	Not too/Not at all important	18	26	33	35	30	25

The Satisfaction Debate

There is a large body of recent research which focuses on the declining morale and satisfaction of academics with the profession (e.g. Rose, 2000). However there is also disagreement about the extent to which this affects the entire professional population equally and the implications this has for the academic workforce. Commentators in the UK contend that there are variations between different groups of staff: research-only and teaching staff (Bryson, 2004); pre-1992 and post-1992 university staff (Casey, 1997) and junior and senior staff (Martin, 1999). The data presented here help to refine our understanding, illustrating a complex and diverse picture of satisfaction amongst the profession. The CAP findings (Table 8), like others (Bryson, 2004), do not suggest a rapid decline in

satisfaction amongst the academic profession. Although overall satisfaction has fallen slightly (2%), dissatisfaction has also fallen, by 13%.

Table 8. Overall Satisfaction (%), 1992/2007

1992		**2007**	
1. Very Satisfied	8	Very High	8
2	41	High	39
Neutral	24	Medium	39
4	21	Low	8
5. Very Dissatisfied	7	Very Low	7

However, the proportion (49%) of academics in England claiming they are satisfied with their job is still much lower than in other counties in the 2007 CAP study (e.g. Canada (73%), Japan (69%), US (64%)), and there are other indicators of a decline in morale within the profession from the UK CAP survey. Support for statements such as those in Table 9 illustrate a decline in academics' perceptions of the profession, including 37% of respondents who agreed that they had considered working outside of HE altogether.

Table 9. Views on the profession, % answering 'Strongly Agree' or 'Agree', 1992/2007

	1992	**2007**
This is a poor time for any young person to begin an academic career in my field	42	49
If I had it to do over again, I would not become an academic	20	27
My job is a source of considerable strain	47	52

As suggested earlier, satisfaction varies among academics, especially according to gender (Table 10). Male respondents appear slightly more dissatisfied with the job, and 41% of men had considered working outside of higher education compared with 34% of women.

Table 10. Views on the profession by Gender, % answering 'Strongly Agree' or 'Agree', 2007

	Male	**Female**	**All**
This is a poor time for any young person to begin an academic career in my field	58	45	49
If I had it to do over again, I would not become an academic	36	22	27
My job is a source of considerable strain	55	51	52

On other variances within the data, 61% of academics over the age of 51 agreed that their job was a source of considerable strain compared with an average among all respondents of 53%.

Researchers (36%) were the least likely to agree with this statement, followed by professors (48%) who ranked just below the average of 53%. Senior lecturers, senior researchers and readers were most likely to agree (62%). Despite job uncertainty, researchers on fixed term contracts experience far more autonomy in the planning and execution of their work, and this aligns with other evidence (Bryson, 2004). Unsurprisingly, only 22% of those who had only been in the profession since 2000 agreed that if they had their time over again they would not become an academic compared with an average of 27%. Only 41% of academics who had entered the profession since 2000 agreed that it was a poor time for any young person to begin an academic career in their field. However, 62% of academics who had entered the profession in the 1980s, and 58% who had entered the profession before 1980, agreed with this statement.

In line with previous findings (Casey, 1997; Locke, 2008b), institutional type has some bearing on how academics responded to questions relating to satisfaction. Academics working in post-2004 universities appear more dissatisfied currently than others.

Table 11. Views on the profession, by Institution Type, % answering 'Strongly Agree' or 'Agree', 2007

	Research Intensive Univ. 192	**Other Pre-1992 Univ.** 252	**Post-1992 Univ.** 97	**Post-2004 Univ.** 19	**HE Colleges** 10	**All** 572
This is a poor time for any young person to begin an academic career in my field	51	44	55	56	63	49
If I had it to do over again, I would not become an academic	32	19	34	47	22	27
My job is a source of considerable strain	45	54	59	64	80	52

Finally, there appear to be differences between the academic disciplines. Only 23% of academics working in design, creative and performing arts appear to be satisfied with their current job, whilst 35% describe their satisfaction as low or very low. Interestingly, 75% of academics working in this field agreed or strongly agreed that their job was a source of considerable stain. Although academics working in the field of fine art appeared more dissatisfied than their academic counterparts in 1992, it was those working in the field of computer science who appeared most dissatisfied with 17% stating they were very dissatisfied with their job situation. In comparison 62% of academics working in the field of psychology in 1992 stated they were very satisfied or satisfied with their job situation. Over half of academics working in engineering and technology units (53%), and administrative, business and social studies (52%) in 2007 rate their overall job satisfaction as high or very high, whilst only 2% of academics working in the field of education rated their overall satisfaction as low.

Teaching

Table 2 illustrated a drop, since 1992, in the number of hours academics spend on teaching. A more detailed examination of their teaching activities reveals some interesting differences in the experiences of academics working in different types of institution. Figure 4 gives an indication of the average class size at various levels of provision and in different types of HEI. Unsurprisingly, the largest classes are at undergraduate level with a median score of 50 students per course. Research intensive universities appear to have the smallest class sizes across the board, while post-1992 universities have higher class sizes at the undergraduate and postgraduate level. This appears to confirm recent findings based on a survey of first and second year undergraduate students (HEPI, 2006).

Academics were asked whether they agreed with a number of statements referring to their teaching activities. More than three quarters of respondents agreed or strongly agreed with the statement that 'Your research activities reinforce your teaching', with only 8% disagreeing or strongly disagreeing. Even larger majorities agreed or strongly agreed that 'You inform students of the implications of cheating or plagiarism in your courses', 'Grades in your courses strictly reflect levels of student achievement' and 'You incorporate discussions of values and ethics into your course content'. Once again the responses to certain questions differed significantly between institution-types, with the greatest variations included in Figure 5. Respondents from the newer universities were more likely to agree that 'Practically oriented knowledge and skills are emphasised in your teaching' and that 'Your service activities reinforce your teaching'. Those in research intensive and other pre-1992 universities were more likely to emphasise international perspectives or content in their courses and have a majority of international graduate students.

Similarly, a higher proportion of academics working in more applied academic disciplines such as engineering and technology (71%), medicine, dentistry and health (83%) and design, creative and performing arts (88%) agreed with the statement 'Practically oriented knowledge and skills are emphasised in your teaching'. 55% of academics working in engineering and technology departments and 45% of those working in the area of administration, business and social studies agreed that 'Currently, most of your graduate students are international', whilst only 10% of academics working in medicine, dentistry and health, 11% of those working in the field of education and 15% of those working in humanities and language based studies agreed with this statement.

Figure 4. Approximate average number of students per course, by Institution Type, 2007

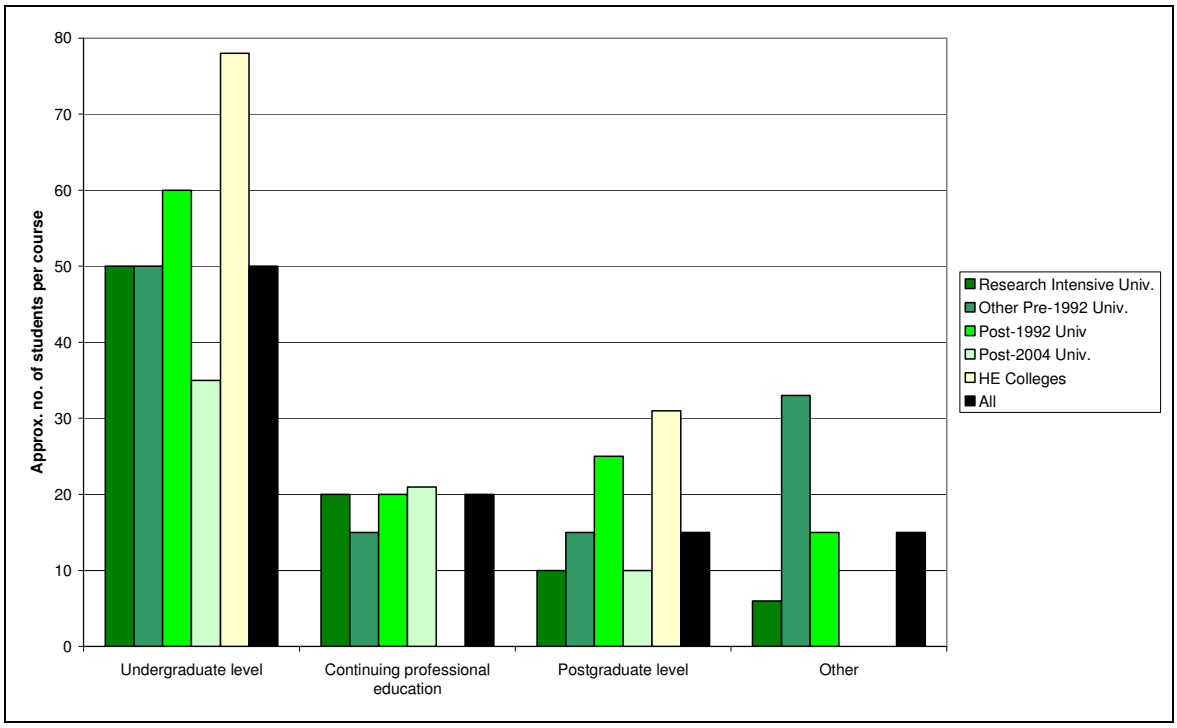
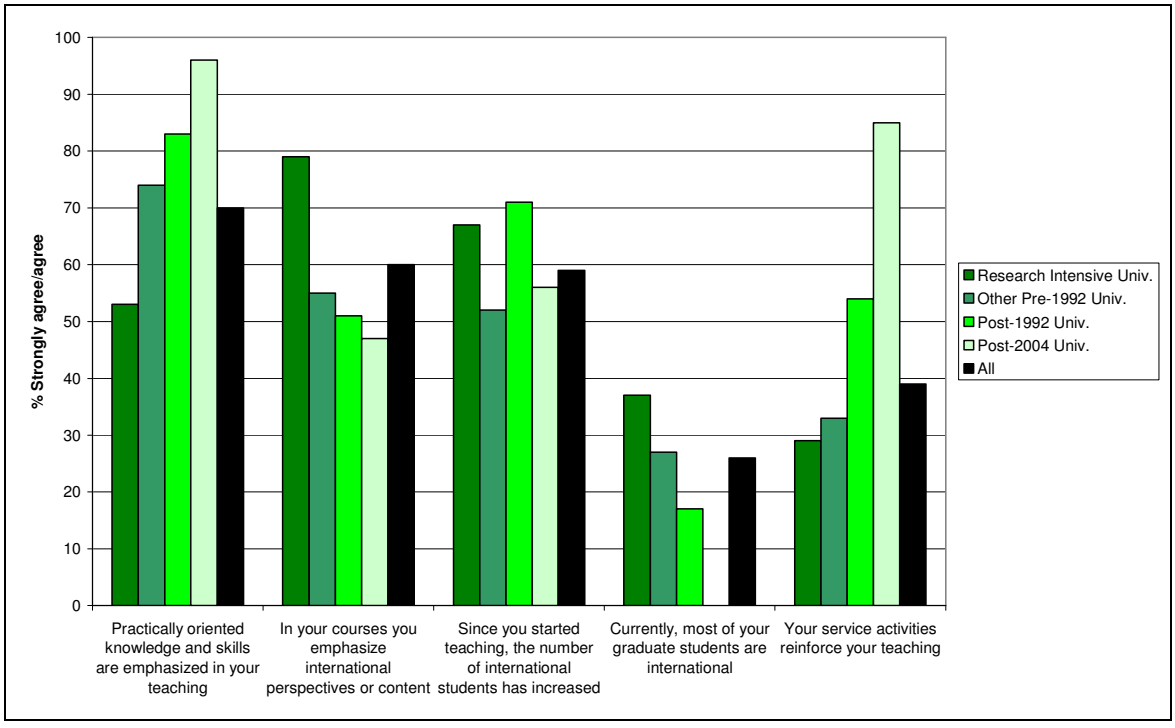


Figure 5: Views on teaching, by Institution Type, 2007



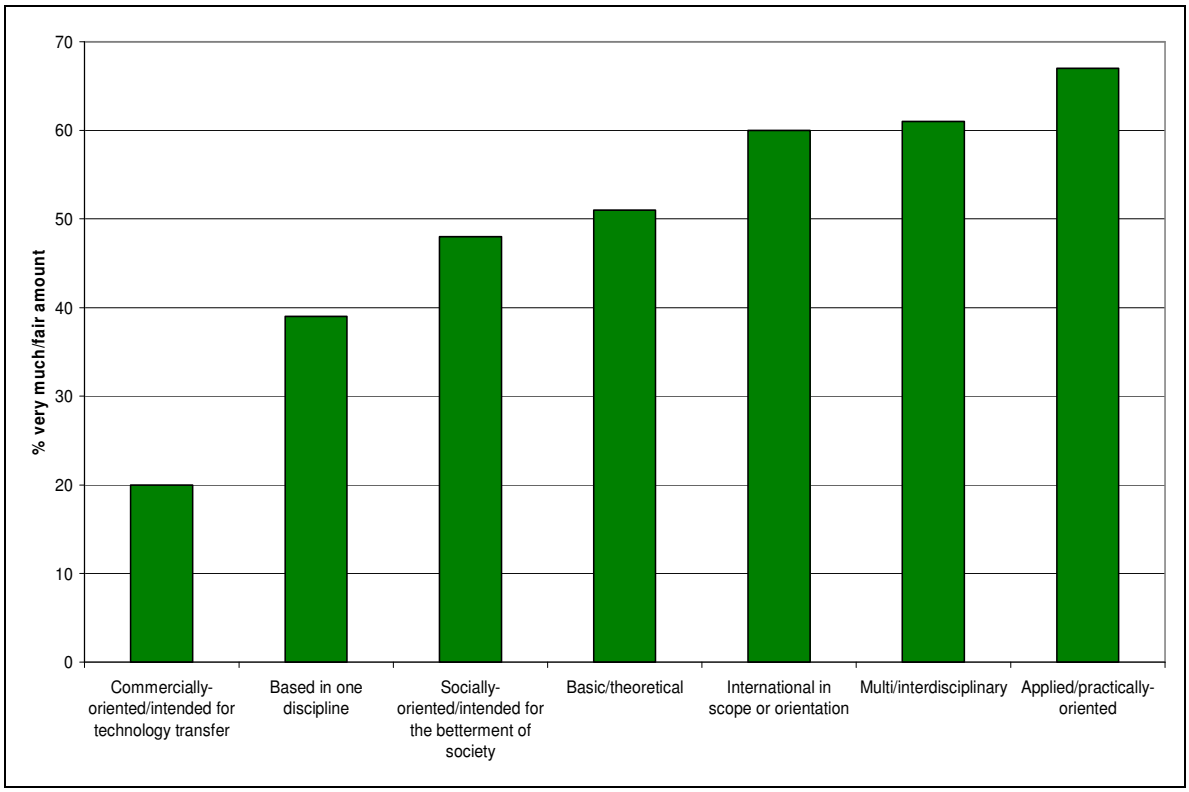
Research

Figure 6 indicates the types of research that academics in England are currently undertaking. More respondents reported undertaking: applied/practically-oriented than basic/theoretical research; multi/interdisciplinary research than investigations based in one discipline; and socially-oriented research intended for the betterment of society than commercially-oriented research intended for technology transfer. These emphases may reflect the priorities of funders, academic publishers, institutional managers and others who can influence the type of research that is supported. For example, the UK research councils expect the research they fund to have 'a societal and economic impact', requiring researchers to demonstrate an awareness of the wider environment and context in which the research takes place and to engage actively with the public at both the local and national levels about the research and its broader implications (RCUK, 2008).

Once again there are differences between those working in different types of institution. A higher percentage of academics in post-1992 (60%) and post-2004 (55%) universities stated that very much or a fair amount of their primary research was socially-orientated or intended for the betterment of society. 62% of academics at research intensive universities and 67% of academics in other pre-1992 universities stated that very much or a fair amount of their primary research was international in scope, compared with only 40% of those in post-1992 universities and 22% of those in post-2004 universities. This may reflect the greater likelihood of academics in the older universities aiming for the higher grades in the Research Assessment Exercise (RAE) that reward research that is internationally excellent or even 'world leading'.

There are again differences between the academic disciplines. 70% of academics working in humanities and language based studies stated that very much or a fair amount of their primary research was international in scope. Unsurprisingly 63% of academics working in the field of medicine, dentistry and health stated that very much or a fair amount of their primary research was socially-orientated for the betterment of society compared with only 19% of those working in engineering and technology units and 22% of those working in biological, mathematics and physical sciences agreeing with this statement.

Figure 6. Emphasis of primary research, 2007



Research output has been heavily influenced by the RAE, and to a lesser extent the Research Councils, which privilege "medium and large scale original quantitative research that will yield short-term results publishable in high-status journals rather than smaller scale applied and discursive research, some of which is communicated to end-users in ways that students might also benefit from it" (Locke, 2004: 103). Table 12 outlines the scholarly contributions made by academics in the three years previous to the survey being conducted in 2007. It compares these with the contributions made by academics in the three years previous to the 1992 survey being conducted. In all types of contribution, apart from professional articles written for a newspaper or magazine, output has increased.

Table 12. Scholarly Contributions, 1992/2007

	1992		2007	
	Mean	**Median**	**Mean**	**Median**
Authored or co-authored books	0.9	0	1.3	1
Edited or co-edited books	0.7	0	1.4	1
Articles published in an academic book or journal	5.4	3	5.8	4
Research reports/monographs for a funded project	2.4	1	3.4	2
Papers presented at a scholarly conference	4.0	2	5.2	4
Professional articles written for a newspaper or magazine	2.4	1	2.2	1
Patents secured on a process or invention	0.1	0	2.0	2
Computer programs written for public use	0.4	0	2.4	1
Artistic works performed or exhibited	0.3	0	4.3	2
Videos or films produced	0.4	0	2.3	1

Interestingly, while the numbers of papers presented at a scholarly conference has increased significantly, the number of articles published in an academic book or journals has not, perhaps reflecting the increased competition in academic publishing. The increased productivity in patents, computer programs, artistic works and videos or films, also reflects the greater commercialisation and commodification of research. Table 13 outlines the views of academics on a number of statements relating to their research.

Table 13. Views on research, 2007

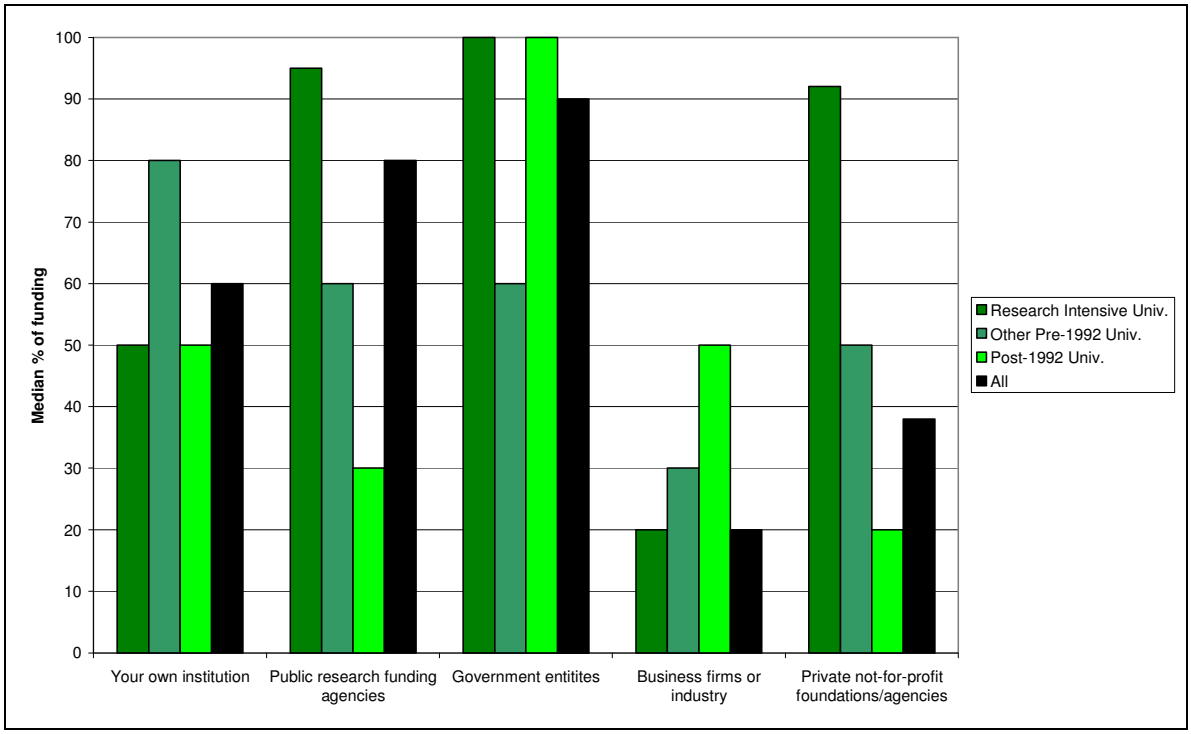
	Strongly Agree/Agree	**Neutral**	**Disagree/ Strongly Disagree**
Restrictions on the publication of results from my publicly-funded research have increased since my first appointment.	12	61	28
Restrictions on the publication of results from my privately-funded research have increased since my first appointment.	10	71	20
External sponsors or clients have no influence over my research activities.	36	30	34
The pressure to raise external research funds has increased since my first appointment.	76	21	3
Interdisciplinary research is emphasized at my institution.	65	26	9
My institution emphasizes commercially-orientated or applied research.	55	35	11

My research is conducted in full-compliance with ethical guidelines.	84	15	1
Research funding should be concentrated (targeted) on the most productive researchers.	22	29	49
High expectations to increase research productivity are a threat to the quality of research.	72	20	8
High expectations of useful results and application are a threat to the quality of research.	55	29	16

76% of academics agreed that the pressure to raise external funds had increased since their first appointment. A majority were also concerned that high expectations to increase research productivity – and of useful results and application – are a threat to the quality of research.

Figure 7 gives an overview of the median percentage of funding for academics' research. It illustrates the advantage of the older universities, and the research intensive universities in particular, in attracting funding from public research funding agencies and private not-for-profit foundations and agencies.

Figure 7. Median percentage of funding for research, by Institution Type, 2007



Evaluation

Finally, it is not surprising that respondents in 2007 were more likely than their 1992 counterparts to report that their teaching and research are evaluated regularly by both peers in their department and external reviewers. This reflects the growth in the quality assessment of all academic activities. In 2007, external review plays a greater part in research than teaching, although the difference may not have been so pronounced earlier in this fifteen year period when the assessment of teaching included classroom observation. A clear majority now report that students regularly evaluate their teaching, and this is likely to be a response to feedback in annual course monitoring processes and a reaction to the first two rounds of the annual National Student Survey in 2005 and 2006.

Table 14. Evaluation of teaching, research and service, 1992/2007

	Your Teaching		**Your Research**		**Your Service**
	1992	**2007**	**1992**	**2007**	**2007**
Your Peers in your department or unit	11	46	8	31	19
The head of your department	44	37	41	39	35
Senior administrative staff	4	5	9	11	12
Your students	45	59	3	2	12
External reviewers	14	21	15	36	6
Yourself		37		33	20
No one		1		5	6

4. Discussion

The findings from the 1992 and 2007 surveys clearly reflect the increasing emphasis on research in the UK after the abolition of the binary divide gave the new universities the opportunity (in theory, at least) to secure public funding for this activity. As public expenditure per student on teaching declined, research (and particularly the RAE) represented one of the few means for HEIs to increase income, even at less than the full costs of the activity generated. Growing evaluation of the outputs both helped to increase productivity but also raised expectations to a point where a majority of respondents feel that quality is at risk. The assessment procedures and mechanisms for allocating research money were also designed to increase selectivity in research funding between institutions. Within institutions, this has often been translated into selectivity between departments and between individuals within departments. So much so, that institutional managers had to make tactical decisions about the proportion of academics to submit to the periodic assessment exercise and, ultimately, about which individuals (and departments) could remain 'research-active' and which should focus mainly on teaching and income-generating alternatives to research.

The period between the two surveys is characterised by the final separation of research and teaching, as a result of policy and operational decisions to distinguish the way these activities are funded, managed, assessed and rewarded (Locke, 2004). This process had started with the

introduction of the RAE in 1986 and, by 2007, resulted in the substantial increase in the number of teaching-only posts and (largely fixed-term) research-only contracts in HEIs, such that these together now account for nearly half of all academics in the UK. The 2004 HE Act also led to the conversion of 14 or so HE colleges and institutes into teaching-only universities, without research degree awarding powers. The separation of the core academic activities in which, increasingly, only some institutions can attract sufficient sums of money for research, then necessitated the creation of a 'third stream' of funding to support collaboration between universities and business and industry that might become a 'second core mission' – after teaching – for some institutions seeking 'to play to their strengths'. Although designed to encourage diversity, these policy initiatives – and, equally, HEIs' responses to them – have had the effect of fragmenting academic activities and introducing new divisions of labour and changing perspectives on core academic roles which appear to be experienced differently by academics according to their age, gender, grade and career stage.

The CAP findings further indicate the key influence that institutional role and type has in this process. Although academics in 2007 still claim greater affiliation with their academic discipline and department than with their institution, the responses suggest a stronger role for both departments and institutions in their working life. The need to manage the processes of fragmentation, external evaluation and internal quality assurance, financial constraints and opportunities, new and growing relations with business etc, has required a growth in institutional operations and the associated administrative and management personnel, such that academics now represent less than half of the 'workforce' in UK HEIs. Again, there are variations in the way these changes are experienced and operationalised within different types of institutions, depending on how well they are positioned to withstand the external pressures and constraints and take advantages of the opportunities opening up to them in an increasingly competitive and marketised HE environment.

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