



The  
British  
Psychological  
Society



# **INTERNATIONAL BENCHMARKING REVIEW OF PSYCHOLOGY**

**Briefing document: statistical overview and commentary**

Paul Wakeling  
September 2010

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# ESRC International Benchmarking Review of Psychology

## Briefing document: statistical overview and commentary

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*September 2010*

### 1 Summary of Key Points

#### 1.1 *Research funding*

- Funding council research income totals around £49 million for 2010/11. This is more than in other comparable disciplines except for Biological Sciences, although it is related to the volume of activity which is higher in Psychology than similar subjects.
- The overall quality of research, as assessed in the Research Assessment Exercise 2008 was fair in relation to comparators, there being several high-performing departments, but quite a long 'tail' of institutions without a strong performance. There was a broad range of mean scores across institutions in the discipline.
- Departments earned around one third of a billion pounds of research income for 2004/05 – 2008/09, most of which came from public bodies. Ten departments (out of 101) account for more than half of this. Average year-on-year growth in earned research income was about nine per cent.
- There is a strong positive correlation between funding council research income and research income earned from other sources.
- The ESRC funds active research projects in Psychology totalling £43.6 million. Psychology was responsible for the highest numbers of both applications and funded projects. MRC funds projects worth £46.3 million, with other psychologically-related projects adding another £36.9 million. BBSRC adds another £28.3 million. There are also some psychological projects funded by EPSRC.
- Funding provided by the research councils is almost all allocated to pre-1992 institutions. BBSRC funds independent bodies too, such as the Babraham Institute.

#### 1.2 *Staff*

- There were around 5,340 FTE staff in the Psychology 'cost centre' in 2008/09, making the discipline about half the size of each of Biological Sciences and Education and about one-third of the size of Social Studies combined.
- Measured by the subject discipline in which their highest qualification was awarded, there were about 7,000 FTE staff who could be classified as psychologists, only half of whom were based in the Psychology cost centre.
- Three-quarters of FTE staff are permanent. About 22 per cent were on research-only contracts in 2008/09.
- Roughly two-thirds of FTE staff are in pre-1992 institutions. Most institutions have fifty or fewer FTE staff, but most staff are in one of the larger departments (with 50-plus staff).
- The age profile of staff in the Psychology cost centre is relatively young.
- UK nationals form a large majority of staff in the Psychology cost centre, although there is evidence of more international recruitment among younger staff.
- Women are in a majority in the profession, especially among younger staff, but not at senior levels.

- The proportion of staff in Psychology from the White ethnic group is higher than among the student body. There is little evidence that this situation is changing for younger cohorts.

### 1.3 *Students*

- Applications for undergraduate study in the discipline are buoyant, showing steady growth between 2004 and 2008. Quality is generally good.
- Similar patterns are seen for undergraduate student numbers, adding to an already large student body.
- Postgraduate numbers have also increased substantially and more rapidly than in comparator subjects since 2002/03. Masters courses have seen strong growth and full-time research student numbers have also increased. A large number of institutions have only a few postgraduate students each, but a small number have many. Not all the research-intensive departments have large numbers of postgraduates and there is a fairly weak relationship between numbers of undergraduates and postgraduates in a department.
- International recruitment of research students is broad, with 90+ nationalities represented. Ireland and Greece are the single biggest providers. Compared to social science subjects however, the proportion of international students is relatively low.
- It would appear that women and students from black and minority ethnic groups are underrepresented among research students in psychology.

### 1.4 *Careers*

- Psychology graduates' unemployment rate is slightly lower than the overall average from all subjects and those for Anthropology, Biology, Economics and Sociology.
- Common 'first destinations' include clerical work, social and welfare jobs and management roles. About one-quarter continue to further study, either as a main activity or in combination with employment. One in fifty reported working as a psychologist as a first destination. Public sector employment is most common.
- Psychology PhD graduates are less likely to enter academia as lecturers or researchers than graduates in most comparator subjects. This no doubt strongly linked to the existence of paths into professional psychology in the healthcare sector in particular, where salaries are generally better.

### 1.5 *Overall*

- Psychology emerges as a large discipline, with a promising future. It has experienced sustained growth in staff and student numbers and research income and has healthy doctoral output.
- If there are risks, these relate to the demographic diversity of the discipline, something of a 'tail' of research performance among weaker departments and the implications for retaining talented researchers of the availability of higher salaries in psychology outside the academy.
- Despite the risks of fragmentation posed by straddling the natural and social sciences (and hence different funding regimes), psychology appears to be enjoying the 'best of both worlds'.

## 2 The scope of this document

The purpose of this briefing document is to provide background statistical information on psychology in UK higher education in support of the ESRC/BPS international benchmarking review of the discipline. Psychology as a discipline presents a number of challenges to anyone trying to provide an integrated and holistic overview of its profile in UK higher education and research. Essentially, these challenges arise because of two facets of the discipline: its straddling of the social and natural sciences; and of the worlds of academic and applied research and professional practice.

Organisationally, higher education and research is conventionally subdivided into areas such as the sciences, social sciences, natural sciences, medicine and so on. These different areas typically have different funding agencies, secure student and research funding at different per capita rates and are counted and classified in different ways in official statistics. For most disciplines, this may only present the occasional difficulty with ‘boundary’ issues. As psychology spans these conventional categories however, there is a danger that, as Mills *et al* note in their *Demographic Review of the Social Sciences*, the discipline ‘falls between two stools’.<sup>1</sup> In fact when it comes to research council funding, we might say that it risks falling between *four* stools, as research with a psychological aspect is funded by ESRC, MRC, BBSRC and EPSRC. In concrete terms, this can make measurement tricky: different councils use different classifications and operate different schemes. Furthermore, there are a number of other measurement and classification problems. Psychology is categorised in slightly different ways when measuring:

- student and applicant numbers (UCAS and HESA ‘JACS’ system: C8 Psychology)
- research performance (RAE Unit of Assessment: 44 Psychology)
- higher education institution income and expenditure and staff numbers (HESA cost centre 07 Psychology and Behavioural Science)

In each case the classification of comparator disciplines changes too. This means that it is not possible to accurately compare like with like on a consistent basis. The discipline revealed in psychology student numbers is inevitably of a slightly different composition to the psychology of the Research Assessment Exercise, which is again different to the psychology funded by ESRC.

Psychology is not the only discipline to face these issues of ‘hybridity’ (geography is another) but it is perhaps unique in also overlapping the worlds of academic research and professional practice. The British Psychological Society combines these two worlds and there are closer links between practice and academic research than seen in many other subjects. Research conducted in practice has important implications for academic research and vice versa. Independent research institutes receive some research council funding for psychological research as, in some cases, do public sector bodies in the NHS and other government departments. Research in these latter areas may be funded by government directly (such as in the Ministry of Defence and also in the NHS). In addition, private sector companies may undertake psychological research for their own purposes. Some of this research conducted outside university settings. To the best of the author’s knowledge, there is no suitable dataset containing details of researchers working outside the academy and contributing scientifically to the discipline. Citation analyses might prove a useful means of obtaining an overview this activity, but that is out of scope for this briefing.

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<sup>1</sup> Mills, D., Jepson, A., Coxon, A., Easterby-Smith, M., Hawkins, P. and J. Spencer (2006) *Demographic Review of the UK Social Sciences*. ESRC, Swindon.

In terms of *intellectual* boundaries, psychology is perhaps more straightforward and integrated a subject discipline than other subjects covered by ESRC's International Benchmarking Reviews (e.g. sociology, economics). Whilst there are key divisions within the subject - say between human and animal psychology – and a range of sub-disciplines (health psychology, developmental psychology, occupational psychology etc), there is a relatively clear set of central intellectual concerns and a strong sense of identity, supported by an established professional body, the British Psychological Society. It would seem that the main area where disciplinary boundaries are in flux relates to the neurosciences at the borders of psychology, neurological science and so on, developments prompted partly by technological advances in brain imaging equipment. Psychology is classified by Mills *et al* as part of the 'research cluster' in the social sciences and as an 'exporter' discipline, meaning that it provides trained researchers both for its own research and for other disciplines (notably, in the case of psychology, for business studies). This means research which might be readily recognised as psychological takes place under the organisational umbrella of other subjects.<sup>2</sup>

These difficulties in consistently delineating UK psychology are effectively intractable. The approach adopted here is to seek the best approximation possible from available data. This means providing an overview of that which is classified as psychology within official statistics, noting that these represent different sets which do not completely overlap. The convention employed in this document is to refer to the discipline in general in lower case ('psychology'); where reference is made to an official category used by organisations which generate higher education statistics such as HESA, UCAS, ESRC and the funding councils the word is capitalised ('Psychology', 'Psychology and Behavioural Sciences' etc). The same applies to other subject disciplines, where it will be noted that there is some inevitable variability in the selected comparators.<sup>3</sup>

## **Disclaimer**

The views expressed in this document are those of the author alone and should not be taken to represent those of the Economic and Social Research Council, the British Psychological Society, the Higher Education Statistics Agency or the University of York.

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<sup>2</sup> As an example, the eminent psychologist Cary Cooper is based in Lancaster University's Management School and appears in the return for the 2008 RAE under Business and Management Studies.

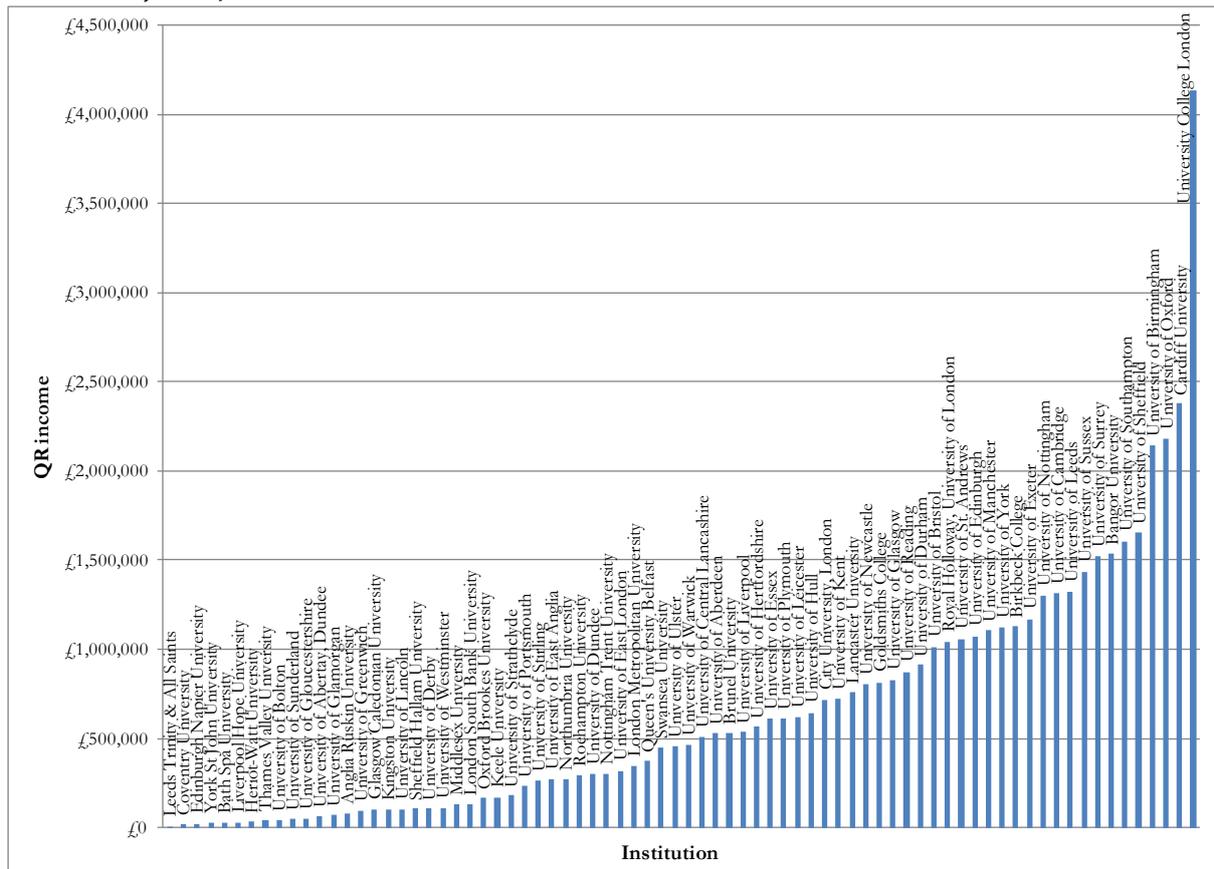
<sup>3</sup> Selecting comparators for psychology is itself problematic and a case could be made for selecting different sets than those used here. Sports science, veterinary science, zoology, animal science, geography, human resources and linguistics, among other disciplines, might have been included.

### 3 Research funding

#### 3.1 'Core' research funding

The UK operates a dual funding system for research: support for research infrastructure and 'blue skies' research is channelled through the higher education funding councils and more targeted, prioritised and thematic research funding is provided on a competitive basis through the research councils.

**Figure 3.1: Quality-related funding council research income for Psychology by institution, 2010/11**

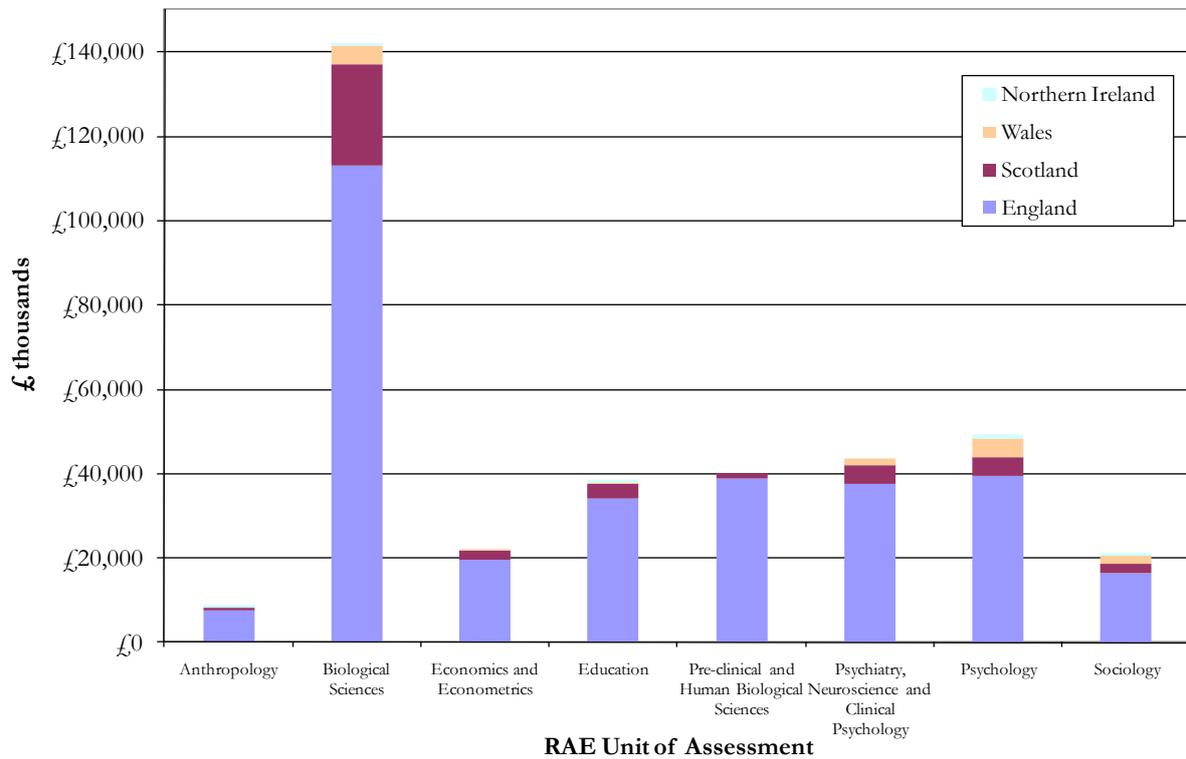


Sources: HEFCE, SFC, HEFCW, DELNI

Both through the distribution of grades and through changes to funding policy, the 'core' funding element for research has been increasingly selectively allocated with the advent of periodic Research Assessment Exercises (RAEs), beginning in 1986. These exercises have involved the evaluation of the quality of research in different subjects by an expert panel.<sup>4</sup> Generally speaking, the highest-ranked psychology departments are based in 'old' universities (which achieved their university status before 1992). However in both the 2001 and 2008 RAEs there was some overlap in the middle of the quality distribution between 'old' and 'new' institutions, giving a slightly less stark sectoral cleavage in psychology than is evident in some other subjects. Figure 3.1 demonstrates this; it also shows that a small number of institutions accrue a large proportion of the total 'quality related' ('QR') funding available in the discipline. One quarter of the total pot is taken by just five out of 76 institutions, with half accounted for by

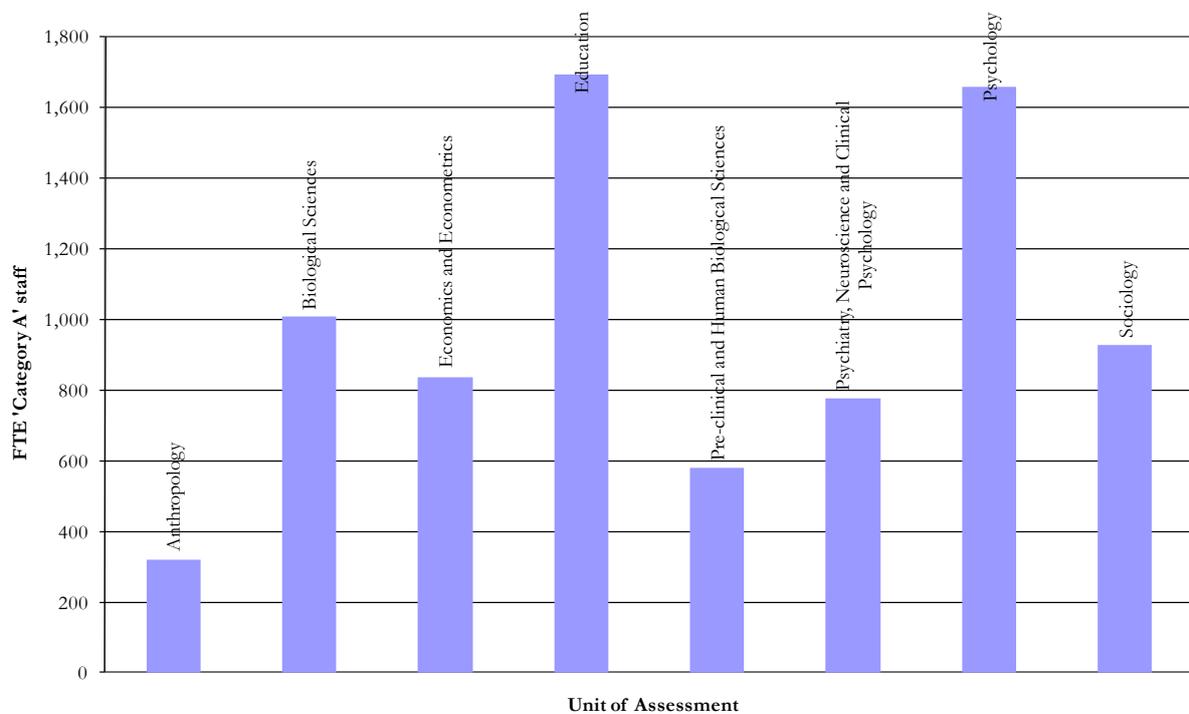
<sup>4</sup> The 2008 RAE was the last in the current format and will be replaced by a 'Research Excellence Framework' in future. Discussions about the format this will take are ongoing; much attention has focused on measurement of research 'impact' in addition to research quality.

**Figure 3.2 Quality-related funding council research income for selected disciplines by home nation, 2010/11**



Sources: HEFCE, SFC, HEFCW, DELNI

**Figure 3.3 Volume of activity for selected disciplines in RAE 2008**

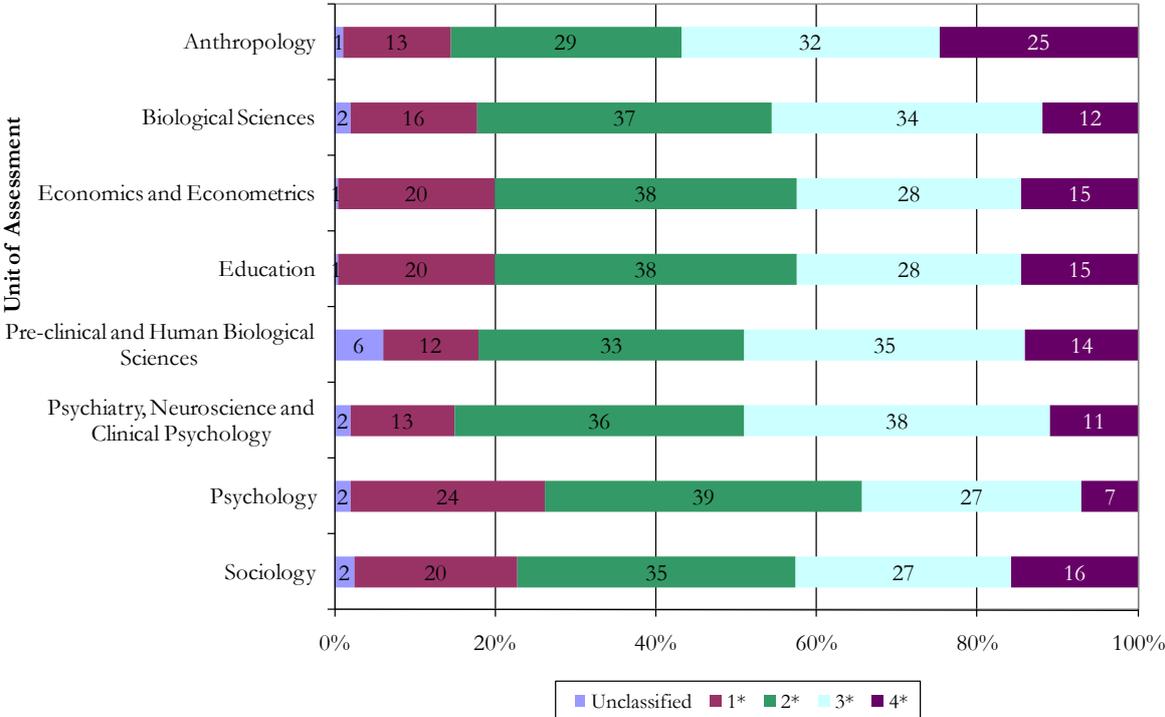


Source: RAE 2008

just 14. University College London alone attracts more QR funding than the bottom 35 institutions added together. Psychology benefitted from a change in government policy (at least in England) following the 2008 RAE which sought to protect science disciplines' income. In contrast to many other social science disciplines, which saw their incomes decline, in the Psychology unit of assessment (UoA) most of the more successful institutions saw their funding increase, in spite of the number of outlets receiving funding *doubling* from the previous exercise in 2001.<sup>5,6</sup>

The Psychology UoA does better than all its main comparators in terms of funding council support for its research (see Figure 3.2), with the clear exception of Biological Sciences. The QR funding model is essentially supply-side led: funding is driven largely by the 'volume'<sup>7</sup> of research activity in a discipline and its relative quality in comparison to other subjects. Strength in psychological research, as judged by RAE outcomes, is well-distributed throughout the UK, with several institutions in Scotland, Wales and both Northern Irish universities attracting substantial QR funding.

**Figure 3.4: Quality profiles, RAE 2008**



Source: RAE 2008

Comparison on the basis of (weighted) QR unit-funding shows that in England, Psychology receives a smaller unit of resource than Biological Sciences, Pre-clinical and Human Biological

<sup>5</sup> It is worth noting here that institutions can be selective about which staff they choose to include in their RAE return and indeed which UoAs to submit too. The number of full-time equivalent staff in each UoA is far from being a reliable indication of the number of academic staff in a discipline, nor even the number of research-active staff.

<sup>6</sup> The actual number of submissions in the Psychology UoA increased only slightly, from 73 to 77. Previously institutions receiving a lower grade did not receive any funding.

<sup>7</sup> Volume here refers to the number of FTE 'category A' staff returned in a UoA. Category 'A' roughly equates to a member of academic staff in a 'typical' role (teaching and research contract, funded by funding council general funds rather than a research grant).

Sciences and Psychiatry, Neuroscience and Clinical Psychology but greater than Anthropology, Economics and Econometrics, Education and Sociology.

To put these figures into context, it is worth briefly considering the ‘quality profile’ and size of Psychology in comparison to similar disciplines from the 2008 RAE (see Figures 3.3 and 3.4). Psychology is second only (narrowly) to Education in size among its comparator subjects (only Business and Management Studies is larger in the social sciences). The complication here is that some of the staff in UoA Psychiatry, Neurosciences and Clinical Psychology might conventionally fit into the discipline, but there is no way to tell how many of those returned under that UoA were working in clinical psychology as opposed to psychiatry (and doubtless the boundaries are rather fuzzy in any case). Geography and Environmental Studies, another UoA which straddles the sciences and social sciences, is much smaller than Psychology in terms of research active staff (even if adding in those in Earth Systems and Environmental Sciences). Substantially more staff were returned as ‘Category A’ in Psychology in RAE 2008 than in 2001 (1,659 against 1,287 respectively).

In terms of the assessment of the quality, rather than quantity of research in Psychology submitted to the RAE 2008, the discipline appears, on the face of it, to perform less well than its comparators. The proportion of ‘outputs’ which were classified as 3\* or 4\* is lower than in all the other disciplines listed here, with a higher proportion classified as 2\* and 1\*.<sup>8</sup> The replacement of a single overall score for a department used in RAE 2001 with a grade profile in RAE 2008 has led to a shift in outcomes as ‘pockets’ or ‘islands of excellence’ in departments which formerly achieved a lower grade have now been identified. Some departments which did not submit in 2001 did so in 2008;<sup>9</sup> conversely some departments which submitted in 2001 were missing in 2008. Some 99 HEIs offer a single-honours psychology undergraduate degree for 2010 entry (source: UCAS website), so some institutions have made a strategic decision not to submit their staff’s research to the RAE at all, or have instead submitted it as part of another UoA.<sup>10</sup>

Figure 3.5 provides an alternative view of psychology’s profile of research quality. It is a box-and-whisker plot of the ‘grade point average’ obtained by institutions in Psychology and comparator UoAs. The GPA represents the mean score obtained by an institution in a unit of assessment. The diagram therefore indicates the spread of quality in a discipline, as measured by the RAE. It shows, for instance, that there was a greater range of departmental scores in Education than in Anthropology. Most Psychology departments scored GPAs between about 1.7 and 2.6; the highest-scoring departments were clustered between 2.6 and 3.2; and there was a long tail of departments scoring between 1.6 and about 1.9. Psychology’s average research quality, on this measure, is lower than many of its comparators (only Education has a lower mean and longer tail. However at the top end there are some very high-performing departments. The results may partly reflect the larger number of submissions in Psychology than in some other disciplines (where sometimes departments with a weaker research profile select themselves out).

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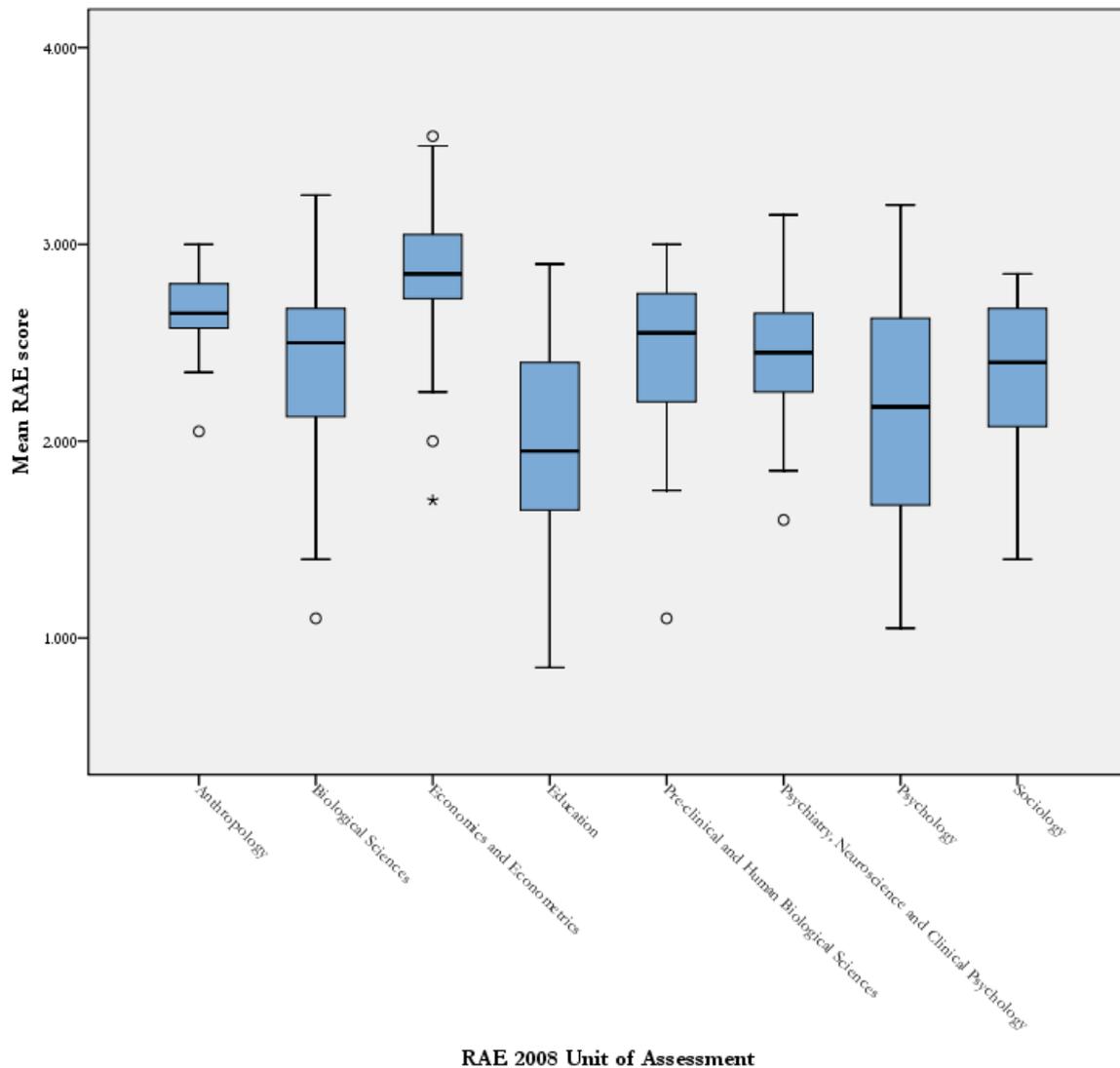
<sup>8</sup> The star ratings used in RAE 2008 carry the following descriptions:

- 4\* Quality that is world-leading in terms of originality, significance and rigour.
- 3\* Quality that is internationally excellent in terms of originality, significance and rigour but which nonetheless falls short of the highest standards of excellence.
- 2\* Quality that is recognised internationally in terms of originality, significance and rigour.
- 1\* Quality that is recognised nationally in terms of originality, significance and rigour.

<sup>9</sup> With the exception of Loughborough (missing from 2008) and UEA (missing from 2001), all of this ‘volatility’ occurred amongst post-1992 institutions.

<sup>10</sup> This explains Loughborough’s absence from the 2008 RAE in Psychology for instance. Their BSc in Psychology is run by the School of Sport, Exercise and Health Sciences where staff were entered in the Sports-related Studies UoA.

**Figure 3.5: Distribution of mean grades across institution, by Unit of Assessment, RAE 2008**



Source: RAE 2008

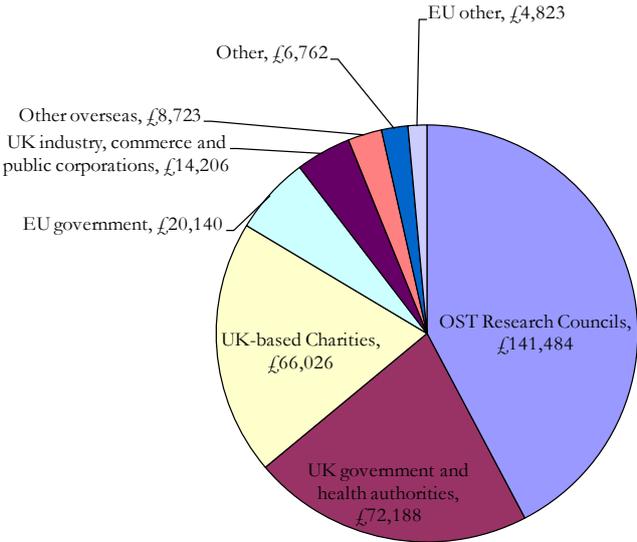
### 3.2 Research grants from other sources

Funding council research income is intended to support research infrastructure and the research environment. Funding for specific research projects in psychology where there are direct costs (e.g. research staff) comes from various other sources, including the research councils, government bodies, charitable trusts and industry, with some funding coming from overseas. Data collected as part of RAE 2008 provide a breakdown of research income for each submission, but this of course excludes those departments not submitted to the Psychology UoA. Fortunately, HESA specifically collects research grant and contract income data for the ‘cost centre’ of Psychology and Behavioural Sciences.

According to HESA, total non-QR research income for Psychology for the five year period 2004/05 – 2008/09 was over £334 million. The total for 2008/09 was £78.5 million, which compares to annual QR for 2010/11 of about £49.1 million. The largest single source of research income in Psychology and Behavioural Sciences, was the UK research councils, representing just

over two-fifths of the total. A further fifth of earned research income came from other UK government bodies, with another fifth from UK charitable bodies. Year-on-year growth in research grant income averaged about nine per cent between 2004/05 and 2008/09, with overall growth across the period of 42 per cent. Proportionally the largest growth in income has come from EU government sources, which have more than doubled across the period, although these account for only 6 per cent of the total. Most of the absolute growth in research income has come from the research councils.

**Figure 3.6: Sources of research income for Psychology and Behavioural Science, 2004/05 – 2008/09 (£000s)<sup>11</sup>**

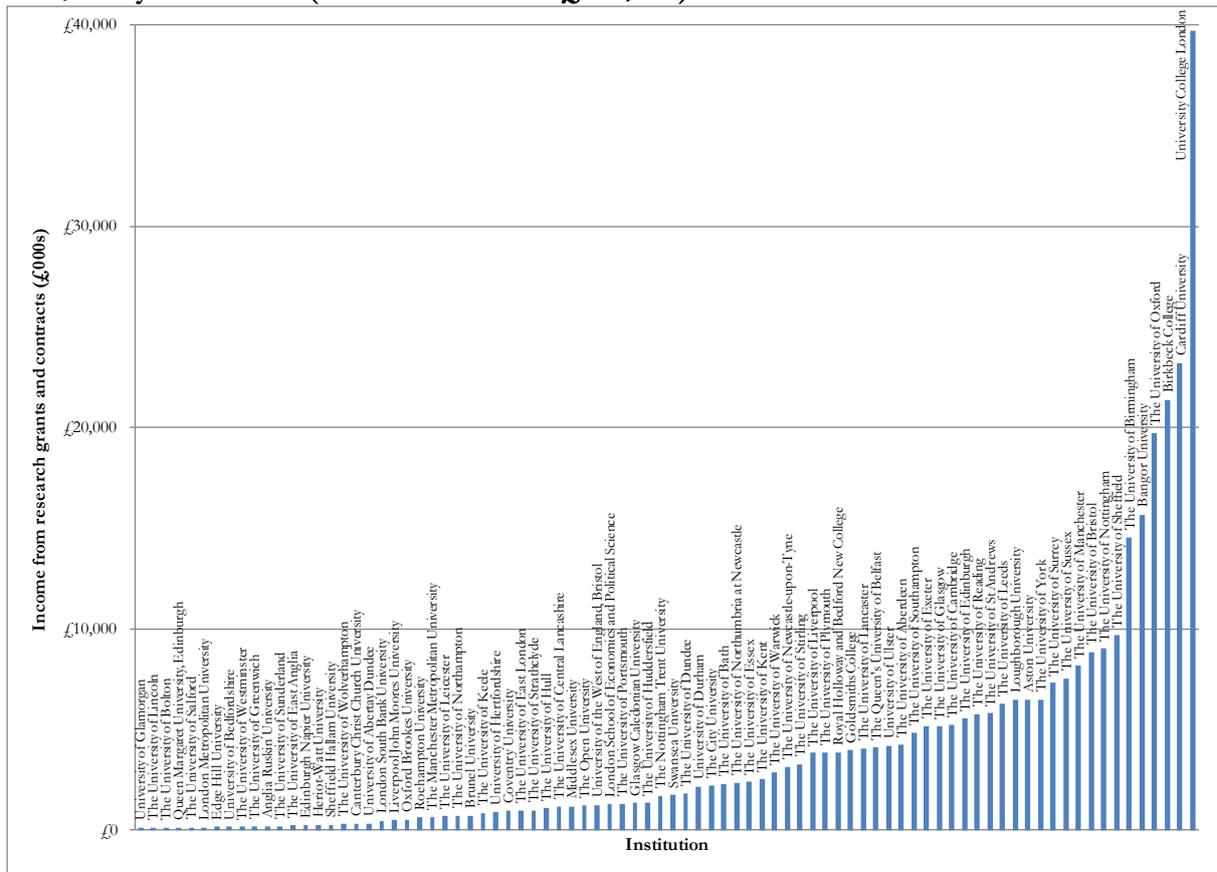


Source: HESA Finance Record 2004/05 - 2008/09

As with QR, there is a heavily skewed distribution of the research income across individual departments. More than half of the total is accounted for by ten out of the 101 institutions which earned research income; the top two departments alone earned one-fifth of the total. A correlation coefficient was calculated for departments between QR and earned research income (comparing QR for with research income for 2008/09). A strong positive association is seen ( $r^2=0.88$ ). A scatter plot was fitted to the same data (where both grant and QR income was earned) which showed few outliers. Birkbeck, University of London earned somewhat more research grant income than would be predicted based on its QR income, whereas the University of Surrey earned substantially less QR and more grant income than predicted.

<sup>11</sup> An alternative source of data on research grant and contract income for Psychology is data collected as part of RAE 2008. This data relates to income associated with the UoA of Psychology, rather than the slightly more diffuse category of Psychology and Behavioural Sciences. The drawback is that only departments entered for RAE 2008 in Psychology appear and that the data only covers the period 2001/02 to 2006/07. However comparing the two datasets, there is very little difference in the distribution of research grant and contract income across the various sources.

Figure 3.7: Research grant income in Psychology and Behavioural Sciences, 2004/05 – 2008/09 by institution (where income  $\geq$  £100,000)



Source: HESA Finance Record 2004/05 – 2008/09

## 4 Research Council-Funded Research in Psychology

### 4.1 *Funding for psychologists*

As already noted, psychology, as a discipline which spans the conventional boundaries of the social and natural sciences, does not map straightforwardly onto the disciplinary divisions imposed by official statistics. The same applies to its orientation to the UK's research councils, which are among the main funders of research projects in universities (and in some non-university research institutes). Whereas each of the comparator disciplines selected for psychology in this briefing document relate fairly readily to a single research council, research in psychology is funded by the Economic and Social Research Council (ESRC), the Medical Research Council (MRC), the Biotechnology and Biological Sciences Research Council (BBSRC) and the Engineering and Physical Sciences Research Council (EPSRC). The nature of the research funded by the councils in psychology differs, as do their funding schemes and disciplinary categorisations. Thus whilst ESRC counts 'Psychology' as one of its major funding streams, EPSRC does not, yet still the latter has a portfolio of funded projects with an identifiable psychological theme (human-computer interaction, neural computing, cognitive science computing and so on) of more than £100 million; funding for psychologically-themed projects is often held by non-psychology departments. MRC and BBSRC are similar to EPSRC in this respect. Furthermore, three of the four councils support research training (doctoral studentships and similar) although only the ESRC operates its scheme in such a way that psychology studentships are separately identifiable.

### 4.2 *ESRC funding*

As at April 2010, the ESRC's portfolio of active projects in Psychology comprised 177 separate grants amounting to around £43.6 million in total.<sup>12</sup> A breakdown of this activity is given in Table 4.1. Full details are provided in Appendix 1.<sup>13</sup> As the table shows, the Council funds a range of different kinds of research activity in psychology. This includes:

- 'Responsive mode' grants in 'large' and 'small' grants versions.
- Fellowships, including Professorial, Research, Placement and Programme varieties.
- Initiatives to encourage research collaboration (including seminar series).
- Support for early career researchers, through Postdoctoral Fellowships and the First Grant scheme.

In Psychology, ESRC funding is concentrated on responsive-mode grants rather than specific initiatives. Fifty-one different institutions were hosting funded projects, although only sixteen (nine per cent) were at post-1992 universities; no non-higher-education-sector bodies held an award. Again, a relatively small number of institutions account for a large proportion of the total, with those performing well in RAE 2008 in the Psychology UoA featuring prominently (especially University College London, with fourteen awards). Most grants were awarded to units

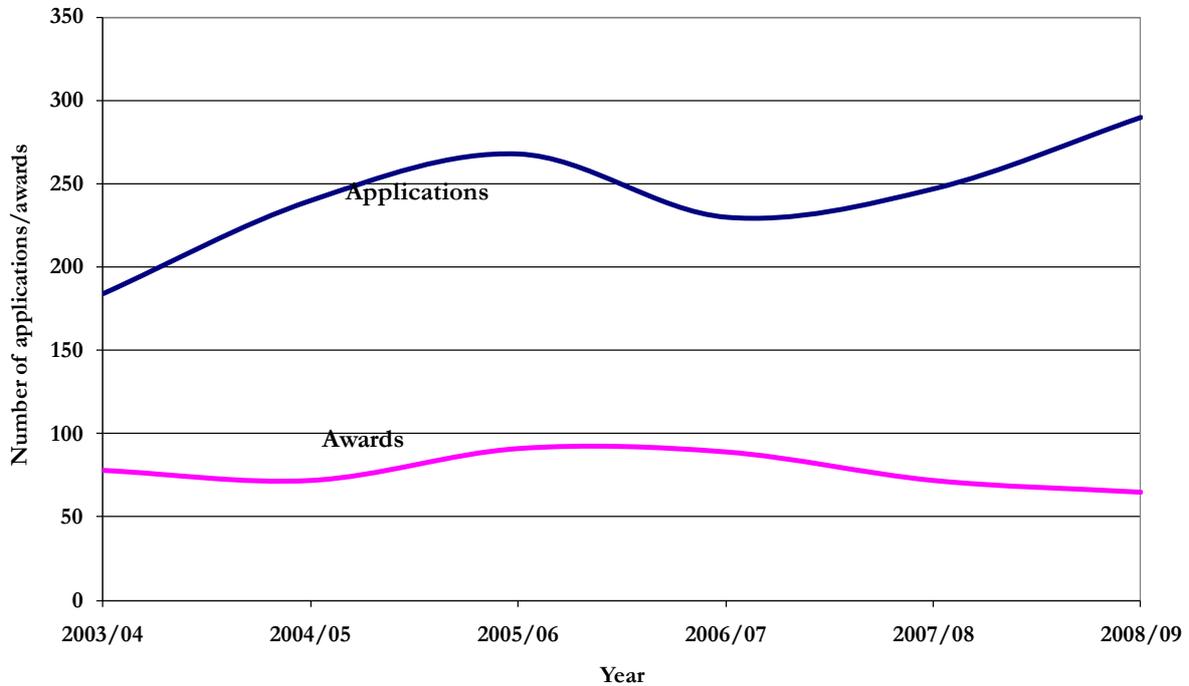
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<sup>12</sup> As with MRC funds below, this is not the recurrent annual spend, but rather the sum of the total value of 'live' projects.

<sup>13</sup> Panel members are also referred to the ESRC Society Today website ([www.esrcsocietytoday.ac.uk](http://www.esrcsocietytoday.ac.uk)) where a fully searchable database of ESRC awards in all subjects is available, giving details of awards and, where available, project outputs.

with ‘psychology’ in their title or where psychology was likely a major component (e.g. schools of social science). A few went to departments focussed on health, sport science or psychiatry. Very few went to other departments.

**Figure 4.1: ESRC funding opportunities in Psychology - applications and awards**



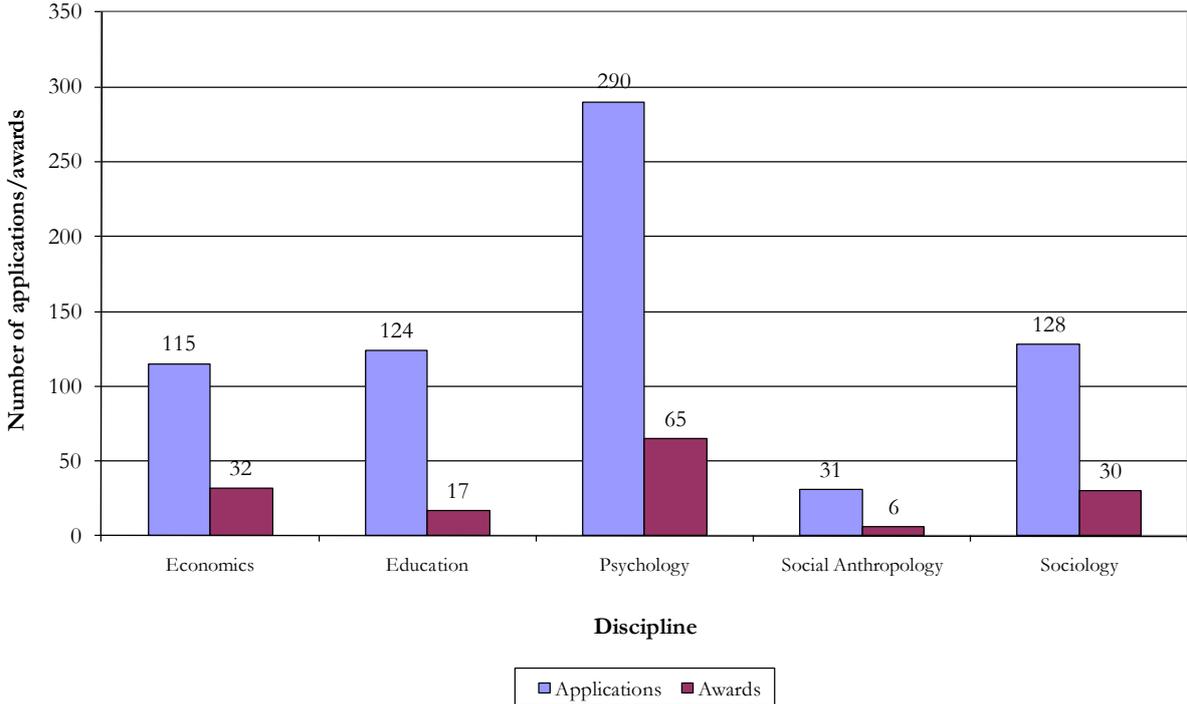
Source: ESRC Annual Reports 2007/08 and 2008/09

**Table 4.1: Current ESRC-funded research projects in Psychology**

Project type	No. of projects	Funding
Research grant (standard)	69	£22,422,741
Large research grant	2	£6,063,984
First grant	16	£4,174,497
Research grant (small)	51	£3,987,723
Research fellowship	8	£2,307,498
Research related activity	2	£1,390,167
Postdoctoral fellowship	14	£1,210,234
Full research award	5	£850,344
Programme fellowship	2	£335,410
Substantive research contract	1	£334,281
Professorial fellowship	1	£228,374
Collaborative research	1	£209,414
Placement fellowship	1	£60,807
Seminar	3	£39,715
Research career fellowship	1	£4,850
<b>Total</b>	<b>177</b>	<b>£43,620,041</b>

Source: ESRC

**Figure 4.2: ESRC funding opportunities – applications and awards by discipline, 2008/09**



Source: ESRC Annual Report 2008/09

Psychology’s success rate for ESRC grant applications has declined somewhat over the period 2003/04 to 2008/09 (see Figure 4.1), although this reflects a rise in applications rather than a decline in the absolute number of awards made. Success rates of applications to the ESRC in all subjects have declined for the same reason. In 2008/09, Psychology was the discipline responsible for the highest number of applications to ESRC by some way, accounting for almost one quarter of applications made. The success rate of 22 per cent is better than average, with Psychology projects comprising some 27 per cent of awards.

ESRC studentship awards to psychology departments are not strictly research income, since they are as much about research *training* as about original contributions to knowledge. However such awards are a useful indicator of psychology’s position in competition with other social science subjects in attracting support for PhD students. Research council studentships offer tuition fees, a stipend of £13,290 plus research training support funds of £750 for full-time students (2009/10 rates) and other enhancements for various schemes. They are thus one of the premium forms of support for doctoral students in the social sciences.

The ESRC currently operates a ‘quota’ system of allocating studentships, largely replacing the previous open competition.<sup>14</sup> There were 22 new quota awards in Psychology in 2008/09, about six per cent of the total awards. This was the seventh largest individual subject allocation out of 21 categories, with Economics (59) and Sociology (39) both attracting substantially more. However there were sixteen further studentships allocated to Psychology through ESRC’s open competition, which was the best result for any discipline. Twenty-two institutions and consortia have a quota allocation, with the number of awards per institution for the three-year period 2008 – 2010 ranging from two to seven. Only one of the institutions is a post-1992 university (Oxford

<sup>14</sup> At the time of writing, ESRC is part way through implementation of a new approach to funding research training through ‘Doctoral Training Centres’.

Brookes, in collaboration with Oxford); two are Welsh (Bangor and Cardiff); and two are Scottish (Glasgow and Strathclyde).

### 4.3 MRC funding

As of May 2010, MRC was estimated to be funding projects totalling £46.3 million (over the lifetime of the awards) which could be identified as psychological; with a further £36.9 million of psychology-related projects (see Appendix 3). Although MRC does not operate a specific category of ‘psychology’ in its funding systems and processes, its operations cover a number of areas such as neuropsychology, parts of cognitive science and mental health research which are part of the definition of psychology adopted for the RAE (and which could equally expect to find a home under the umbrella of BPS).

MRC’s funding covers three principal types of activity:

- Responsive-mode research grants, including specific awards for new investigators.
- Fellowships (postdoctoral, clinical training, clinician scientist, some joint with other research councils)
- Programmatic funding for sponsored research units (such as the MRC Cognition and Brain Sciences Unit at the University of Cambridge).

**Table 4.2: Current MRC-funded research projects in psychology (excludes psychology-related)**

Project type	No. of projects	Funding
Research Grants	20	£13,375,388
Trial Grant	6	£5,326,712
Co-operative Group Grant	1	£4,470,922
Centre Grant	2	£4,223,637
Research/Programme Grant	2	£3,702,880
Clinician Scientist Fellowship	4	£3,461,220
Career Development Award	1	£2,225,913
Strategic Grant	8	£1,968,815
New Investigator Research Grant	5	£1,764,954
Senior Non-Clinical Fellowship	1	£1,433,935
Clinical Training Fellowship	4	£852,506
Population Health Scientist	3	£838,160
Special Training Fellowship in HSR	3	£700,195
ESRC/MRC Inter. Postdoctoral Fellowship	4	£663,499
Bioinformatics Training Fellowship	1	£347,130
New Investigator Awards	1	£324,618
Career Development Award - Biostatistics	1	£283,025
FLARE Fellowships	1	£215,840
ESRC/MRC/NIHR/ Health Economics	1	£164,674
<i>Total</i>	<i>77</i>	<i>£46,344,023</i>

Source: MRC

Twenty-three institutions were holding a MRC award for a psychology project, excluding the MRC's own 'embedded' units. None of these were held by post-1992 universities (nor were any of the psychology-related projects). From available data it is not possible to tell whether these projects were being pursued within or outside conventional psychology departments.

Since both the proportion and absolute number of psychology applications submitted to MRC is small in any given year, numbers tend to fluctuate across time and it is difficult to identify trends. In 2008/09, MRC reports 67 grant and seven fellowship applications for psychology, of which eleven and two were funded, respectively. In 2009/10 there were 53 grant applications (eleven funded) and eight fellowship applications (one funded).

Standard PhD studentships provided by MRC are awarded to institutions on a block grant basis and so it is not possible separately to identify psychology studentships supported by the Council.

#### 4.4 BBSRC funding

Like MRC, BBSRC funds responsive mode grants, fellowships and some 'core institutes' which cover psychology. BBSRC estimates that around two per cent of its funding is allocated to psychology departments. In 2009/10, this represented a recurrent annual spend of £8.3 million (excluding studentship support). As at April 2010, its portfolio of 'live' projects on psychological subjects totalled £28.3 million (see Appendix 2). Most were awarded to researchers working in psychology departments, with others working in biology, neurology, zoology, anatomy, medicine and so on.

Twenty-eight institutions held an award, again with no post-1992 representative. Those institutions successful in RAE 2008 in Psychology are prominent in terms of funding obtained, including University College London and Cardiff. Bristol also features. The Babraham Institute, an independent charitable research organisation based in Cambridge has the second largest value of funded projects after UCL.

**Table 4.3: Current BBSRC-funded research projects in psychology**

Project type	No. of projects	Funding
Responsive mode	50	£20,901,178
Animal Welfare Programme (AWP)	3	£2,558,701
David Phillips Fellowship (DF)	5	£2,695,591
Diet and Health Research Industry Club (DRINC)	4	£2,033,087
Research Development Fellowship (RDF)	1	£77,210
<i>Total</i>	<i>63</i>	<i>£28,265,767</i>

Source: BBSRC

Information on studentships and application success rates was not available from BBSRC.

#### 4.5 EPSRC funding

EPSRC was funding, during April 2010, live research projects with a total value of £107.1 million (see Appendix 4). However many of these projects might be better considered as psychology-related than as psychology *per se*, with psychology departments firmly in the minority among grant

holders. A substantial proportion of the grants were in areas at the boundary between computer science and psychology.

Funding provided by EPSRC divides simply into responsive and targeted grants. Since EPSRC does not view psychology as part of its core remit, nor does it consider that its fellowship and studentship funding covers the discipline. For similar reasons, it is not possible to identify success rates for psychological applications to EPSRC. Fifty-five institutions held psychology-related awards from EPSRC, including four post-1992 institutions.

## 5 Staff Demographics

As stated in section 2, what counts as ‘psychology’ in official statistics is not entirely uniform. When investigating staff numbers, categorisation is by ‘cost centre’ (and hence related to accounting practice), where the relevant category is ‘Psychology and Behavioural Sciences’. Perhaps a more useful definition of psychology for the purposes of investigating staffing would be to use allocation (actual or notional) to the RAE UoA for Psychology. Due to data difficulties encountered by HESA in 2007/08 and 2008/09 with their Staff Record, this has not been possible and so cost centre data is used as the principal measure here. Interdisciplinary comparisons are therefore somewhat blunter than would be ideal, since the social sciences are largely collapsed into a single cost centre (‘Social Studies’). To supplement this data, it has also been possible to approximate the ‘home’ discipline of a member of academic staff, based on the reported field of study of their highest qualification. These latter data need to be treated with caution however as there are a large number of ‘not known’ values. HESA data for 2006/07, which does contain UoA information, is used to provide further context.<sup>15</sup>

### 5.1 Overall numbers

Based on cost centre figures, Psychology and Behavioural Sciences appears to be a medium-sized discipline, around one-third of the size of Social Studies and half that of Education and Biosciences respectively (Figure 5.1a). Using the older and more limited UoA data from 2006/07 tends to confirm some of the relativities, although the absolute numbers reported in Psychology and some of the other subjects are substantially lower (Figure 5.1b). The third measure of the number of psychologists in higher education – the subject discipline of highest qualification – shows an even larger staff body than is evident from the cost centre data: there were 7,005 FTE staff with a highest qualification in Psychology in 2008/09. Interestingly less than half of these were in the Psychology and Behavioural Sciences cost centre! Around 300 were in Social Studies, over 400 in Education and 130 in Biosciences. The remainder were in other disciplines, with it being likely that many could be found in business schools (although the data to confirm this were not accessible). Psychology has been characterised as a research-focused ‘exporter’ discipline,<sup>16</sup> which produces teachers and researchers for other disciplines (such as business, education and others).

Slightly over two-thirds of FTE staff in Psychology and Behavioural Sciences are employed on permanent contracts, a proportion almost identical to Social Studies. In Biosciences and Anatomy and Physiology only around half of staff are on permanent contracts. Although the proportion of permanent staff in a discipline bears some relationship to the proportion of staff that are research-only (i.e. research assistants and similar, who are much more likely to be fixed-term than those engaged in teaching and research), there is still some variation across the cost centres. Twelve per cent of staff are research only in Social Studies, compared to 22 per cent in Psychology and Behavioural Sciences.

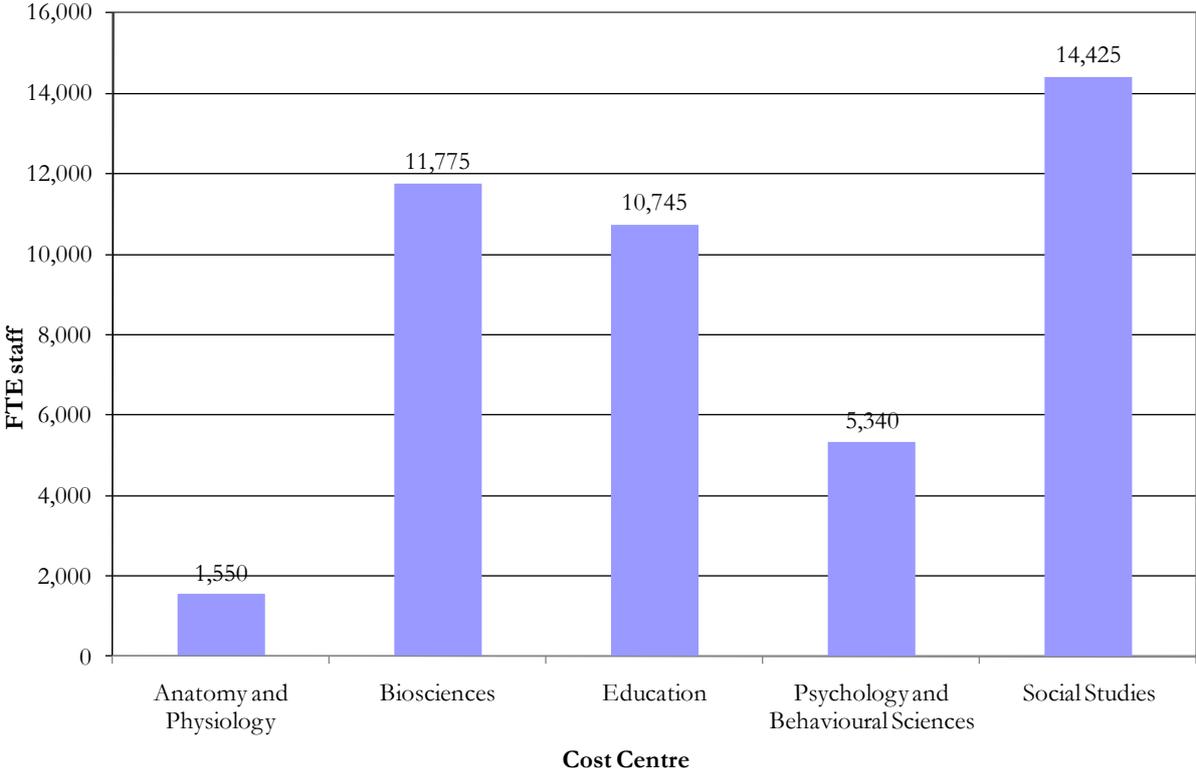
Slightly under two-thirds of Psychology and Behavioural Sciences FTE staff in 2008/09 were located in pre-1992 universities. The mean FTE staff across all institutions was 48, but with a standard deviation of 41. However about two-thirds of the FTE staff were in the larger units (more than 48). In other words, although there are a large number of units, many of these are quite small and there is some degree of concentration of personnel. The largest institutional cost centres for Psychology and Behavioural Sciences measured using the HESA data are at the Open

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<sup>15</sup> Note that this data was procured for the International Benchmarking Review of Economics, hence some of psychology’s comparator disciplines were not included.

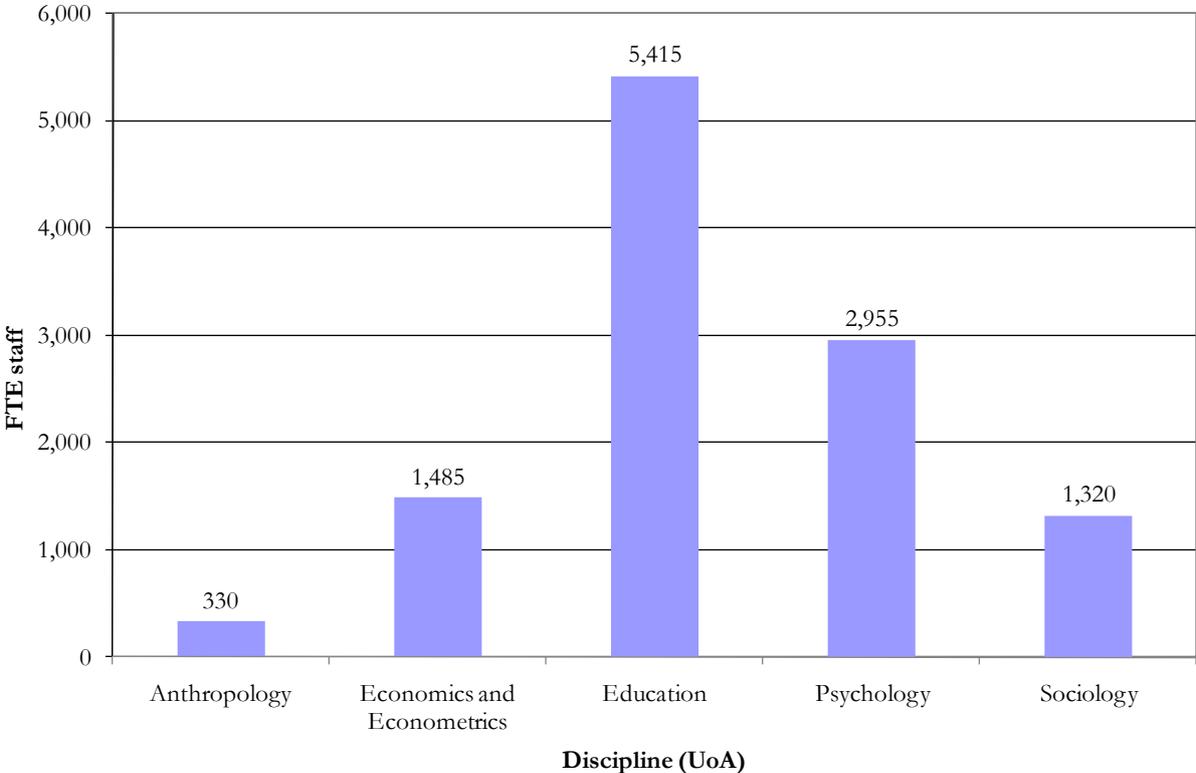
<sup>16</sup> Mills *et al*, *op. cit*.

**Figure 5.1a: Full-time equivalent (FTE) staff by selected cost centre, 2008/09**



Source: HESA Staff Record 2008/09

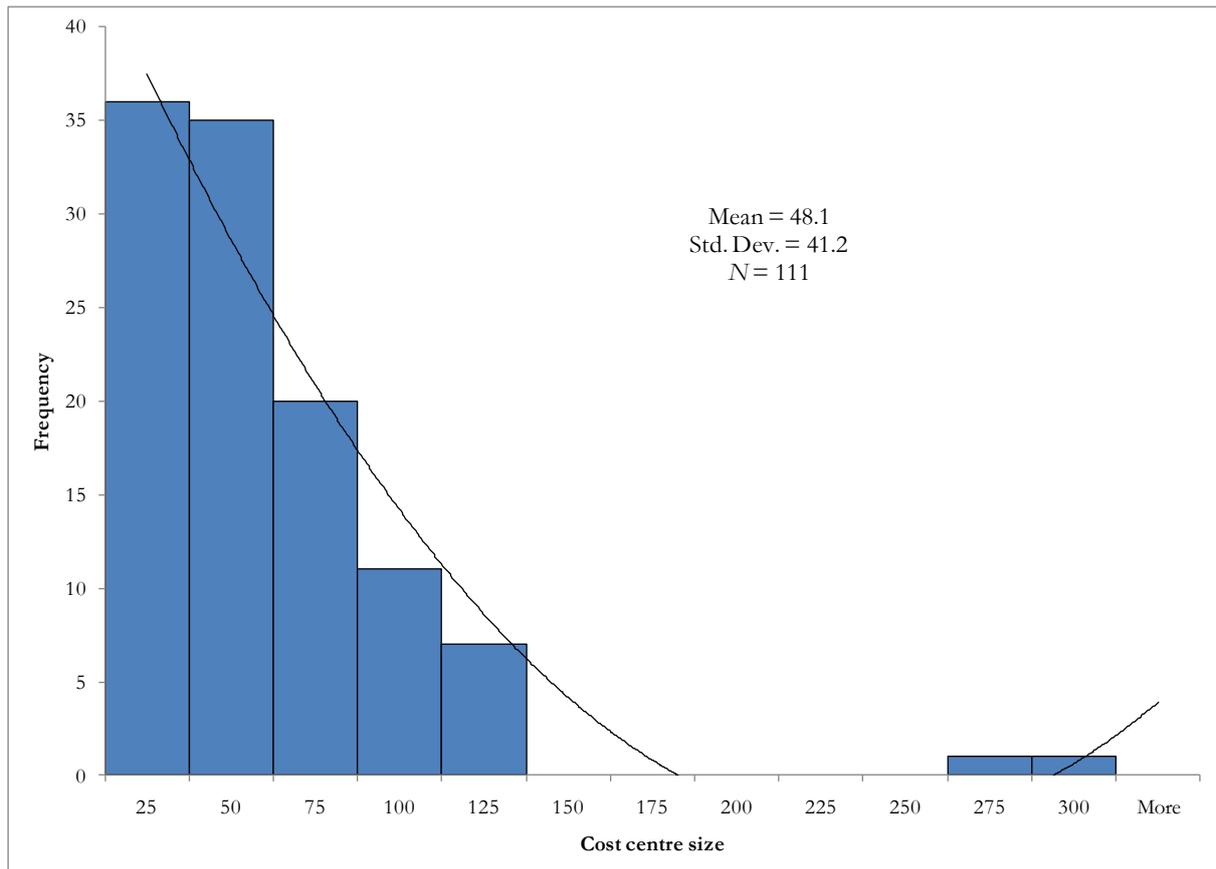
**Figure 5.1b: Full-time equivalent (FTE) staff by selected UoA, 2006/07**



Source: HESA Staff Record 2006/07

University and University College London, both of which have over 250 FTE staff. Seven other institutions (Bangor, Birmingham, Cardiff, Goldsmiths, Nottingham, Royal Holloway and Sussex) have more than 100 FTE staff in the cost centre. Using data from the RAE in 2008, the largest submissions (in terms of staff FTE) were made by Birmingham, Cardiff, Sheffield, Sussex and University College London.

**Figure 5.2: Histogram of size of UK Psychology and Behavioural Science centre (in terms of staff FTE for 2008/09) by institution**



Source: HESA Staff Record 2008/09

### 5.2 Grade profile

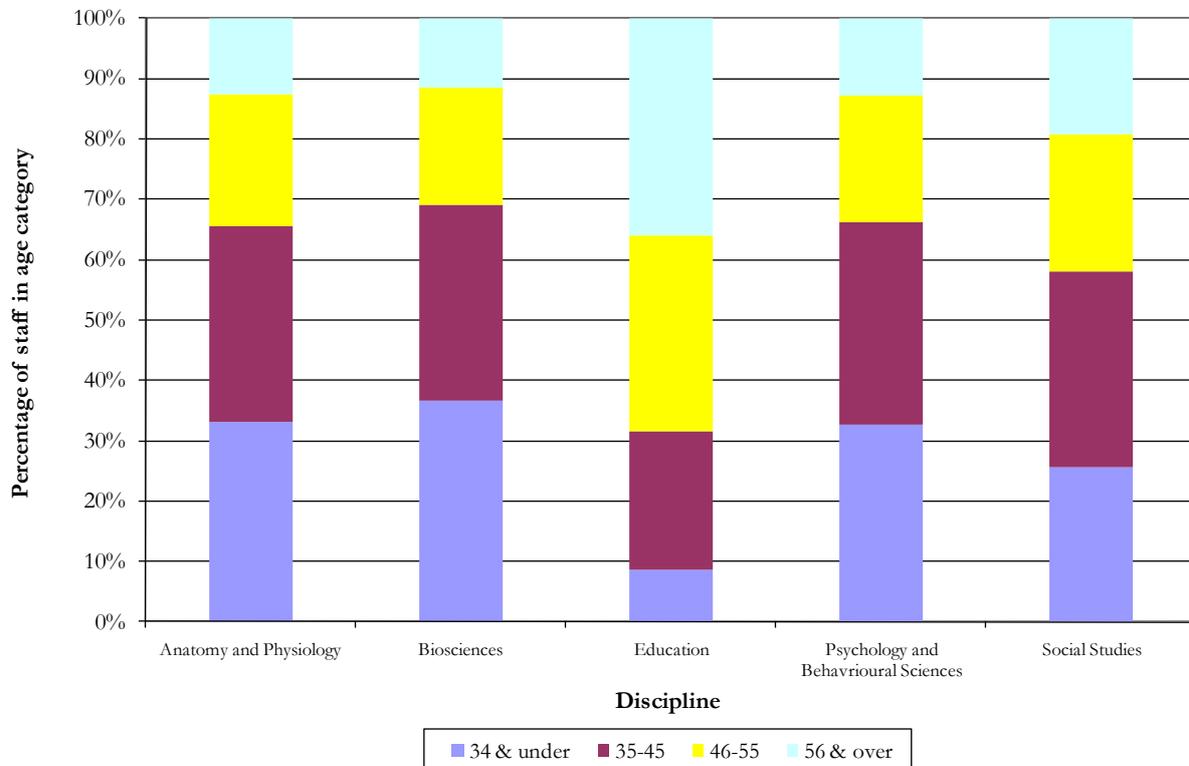
Just fewer than one in ten FTE staff in the Psychology and Behavioural Sciences cost centre are of professorial status or equivalent. This is almost identical to Anatomy and Physiology, Biosciences and Education, but lower than the proportion in Social Studies (approximately three in twenty). It is not possible to calculate the proportion of staff who are ‘research active’ for RAE 2008. However using RAE 2001 data, Mills *et al* estimated that some 64 per cent of those located in departments submitted to the Psychology UoA were submitted in the exercise. Figures for comparator disciplines in the social sciences were 93 per cent (Anthropology), 57 per cent (Economics) and 43 per cent (Education).

### 5.3 Socio-demographic characteristics

Concern has been expressed recently about the demographic profile of the social sciences in two respects. The first concerns the continued supply of academic labour to sustain high quality teaching and research, manifested as worries about the age of social scientists and a possible

dependence on non-UK nationals. The second relates to equity and diversity and under- or overrepresentation according to gender, race/ethnicity, social class and other characteristics. In the natural sciences, this latter concern has been expressed particularly strongly for women's position in the academic labour market.

**Figure 5.3: Age profile of FTE staff in selected disciplines, 2008/09**



Source: HESA Staff Record 2008/09

The age profile of FTE staff in the Psychology and Behavioural Sciences cost centre is somewhat younger than its comparators, especially Education (Figure 5.3). The discipline has previously been identified as having a “relatively ‘young’ demographic profile”<sup>17</sup> with around one-third of staff being aged under 35. This partly reflects the proportion of staff on fixed-term contracts, who tend to be younger across higher education; however some three-fifths of permanent staff in the cost centre are aged 45 or under.

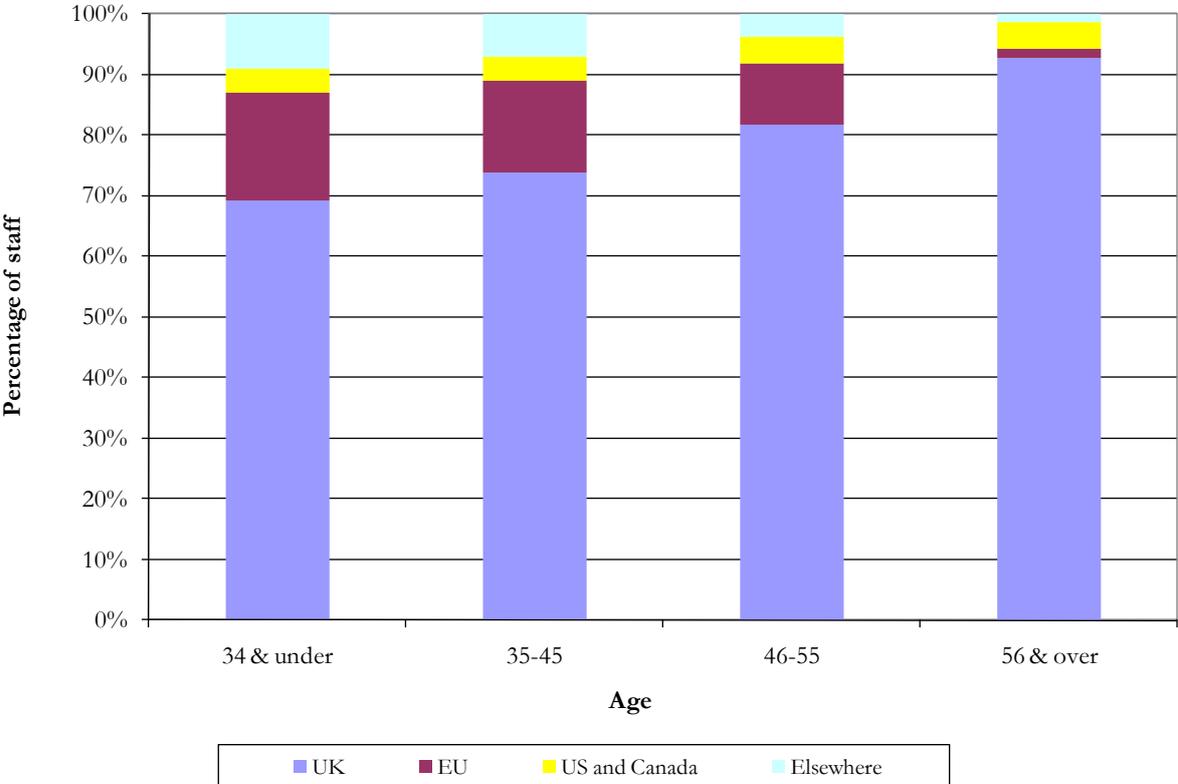
Some 73 per cent of staff in Psychology and Behavioural Sciences are UK nationals. The proportion of UK nationals increases among older staff and among the professoriate. International competition for academic talent and inward migration of academic labour to psychology would appear to be concentrated in more junior positions rather than being driven by the recruitment of international ‘stars’ for RAE purposes.

Women are in a small majority (56 per cent) among academic psychologists as judged by staff FTE in the Psychology and Behavioural Sciences cost centre and also those with a highest qualification in Psychology (61 per cent). Among its comparators, Education is the only other cost centre with a female majority (61 per cent). Women comprise 42 per cent of FTE staff in Biosciences, 43 per cent in Social Studies and 49 per cent in Anatomy and Physiology. As is well-established across the board in universities, women tend to comprise a higher proportion of

<sup>17</sup> Mills *et al*, op. cit., p. 67.

those in lower grades; psychology is no exception. Only 26 per cent of professional staff are female in Psychology and Behavioural Sciences and women are in the majority in ‘teaching only’ and ‘research only’ positions, but not in ‘teaching and research’ roles. Women are also overrepresented among those with fixed-term contracts. This *might* be affected by the differing age profile of men and women: men are in quite a large majority (61 per cent) among the over-55s, women in a small majority in the 35 – 55 age range (53 per cent); with a clear majority among the youngest age group (66 per cent). Since professors are likely to be older, it follows that there will be *some* gender differences in grading, but a gender gap remains: only 22 per cent of professors aged over 55 are female. As seen in many disciplines, there appears to be a downward shift in women’s representation starting after undergraduate level and continuing steadily through to the professoriate. That said, if treated as a science subject, psychology is perhaps a limited success story, having a majority-female student and staff body.

**Figure 5.4: Nationality of Psychology and Behavioural Sciences FTE staff 2008/09 by age group**



Source: HESA Staff Record 2008/09

Data on the ethnic background of UK FTE staff in Psychology and Behavioural Sciences indicate that, of those declaring an ethnicity, 92 per cent were classified as White British, a figure higher than all comparator cost centres with the exception of Education. Excluding non-UK nationals increases the representation of the White British ethnic group to 95 per cent. There were fewer than ten FTE staff from a Bangladeshi background; apart from the ‘Other background’ group, the largest minority ethnic group was ‘Asian or Asian British – Indian’, with about 60 FTE staff (as opposed to over 4,600 staff of White British ethnicity). Among professorial staff, the proportion of staff from the White British group increased to 98 per cent: out of almost 500 FTE staff of professorial status, fewer than 15 were from a minority ethnic background. Data indicate there are less than five female professors from a minority ethnic background in Psychology and Behavioural Sciences. There is a small shift in the representation

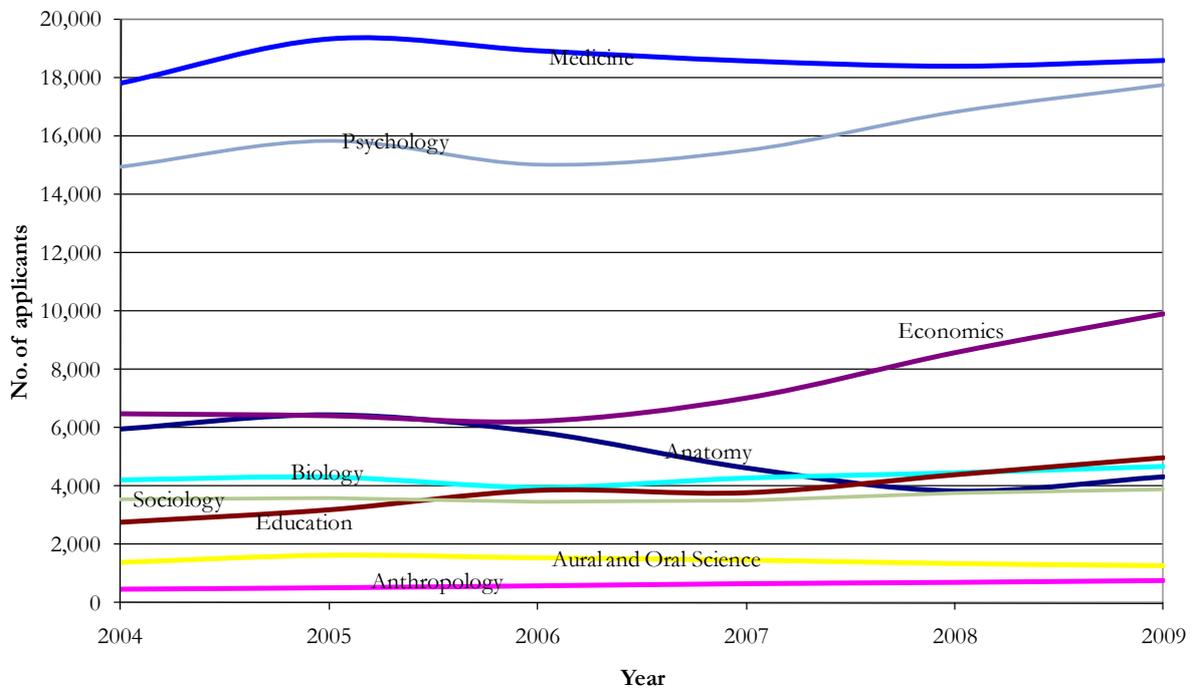
of those from minority ethnic backgrounds among younger cohorts, but even among under 35s the proportion of White British staff is 89 per cent.

## 6 Applicants, Students and Graduates

### 6.1 Undergraduate applicants

UCAS lists single honours psychology courses at over 100 institutions for 2010 entry, with hundreds more combinations incorporating psychology. For 2009 entry, UCAS reported 17,761 applicants with a subject preference of Psychology.<sup>18</sup> This makes it a substantially more popular subject discipline for undergraduate study than all of the selected comparators, with the exception of Medicine. There were 15,385 accepted applicants for Psychology, indicating that the subject is oversubscribed, a situation shared with Anatomy, Economics and Medicine (although the latter is by far the most oversubscribed). Overall in the UCAS scheme there were around 1.3 applicants for every place in 2009. About 2,300 Psychology applicants were accepted through the ‘Clearing’ system, which is intended to place applicants who have not been offered a place through the ‘normal’ application cycle. This was about the same proportion as for Economics, Anatomy and Biology, slightly lower than the UCAS average.

**Figure 6.1: Applicants via UCAS for selected subjects 2004 - 2009**



Source: UCAS

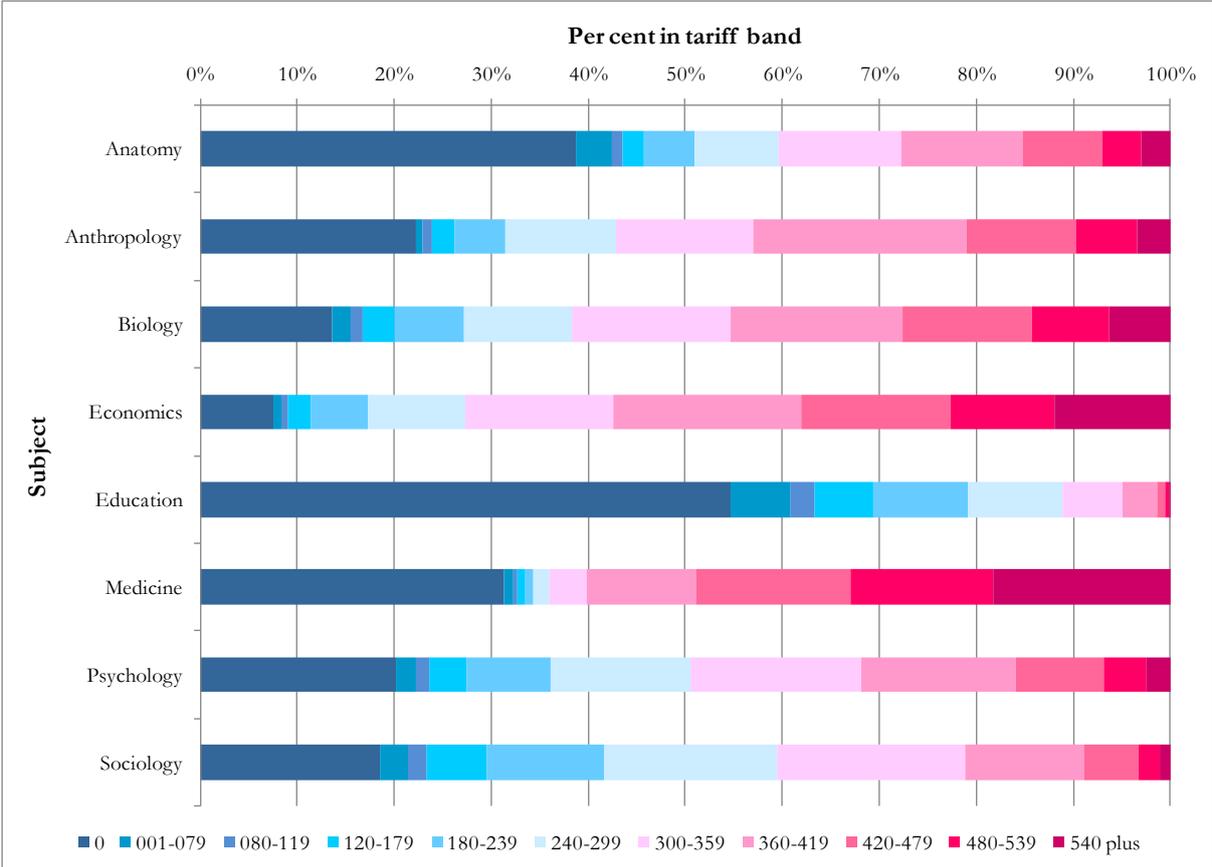
Psychology has enjoyed a sustained popularity among applicants for full-time undergraduate study with growth in recent cycles matched only by Economics among its comparators. This is likely to reflect the growth in the availability and popularity of the subject at A-level and a general growth in public awareness of psychology, including through the media (popular TV shows like *Cracker* and *Big Brother* where psychology is often discussed). The subject may also be perceived as likely to lead to employment (there being strong links between the subject in universities and the professional practice of psychology). Psychology applications rose in number by 19 per cent in the period 2004 – 2009; in the same period, the UCAS scheme as a whole grew by 32 per cent,

<sup>18</sup> It is difficult to record precisely the number of applications for a subject because each applicant can make up to five applications through the UCAS scheme, to a range of subjects if they wish— applications are therefore not equal to applicants. UCAS thus computes an applicant's *preference*, based on their most common choices.

although the total figure includes the incorporation by UCAS of new areas of activity which mean it is difficult to compare like with like. The figures should be read with care however as they do not give a detailed understanding of changes in the popularity of the various subjects as part of combined degrees.

Figure 6.2 shows the *quality* of applicants to Psychology and selected comparators via UCAS measured using the UCAS ‘tariff’. A tariff score is calculated by aggregating the scores for individual qualifications which an applicant possesses, such as AS and A2 qualifications, Scottish Highers, BTEC qualifications and others. Grade ‘A’ at A-level is equivalent to 120 tariff points; an ‘E’ grade is worth 40. Unlike previous systems for calculating A-level ‘points’, there is no maximum score. The tariff thus represents a somewhat crude measure of quality, but it does allow some comparison across subjects. Applicants to Psychology courses are generally quite well qualified, having higher tariff scores on average than those applying to Sociology and Education. However they are on the whole less well-qualified than applicants to the other disciplines, particularly Economics and Medicine.

**Figure 6.2: Tariff score of UCAS applicants accepted to degree courses in selected subjects, 2009 entry**

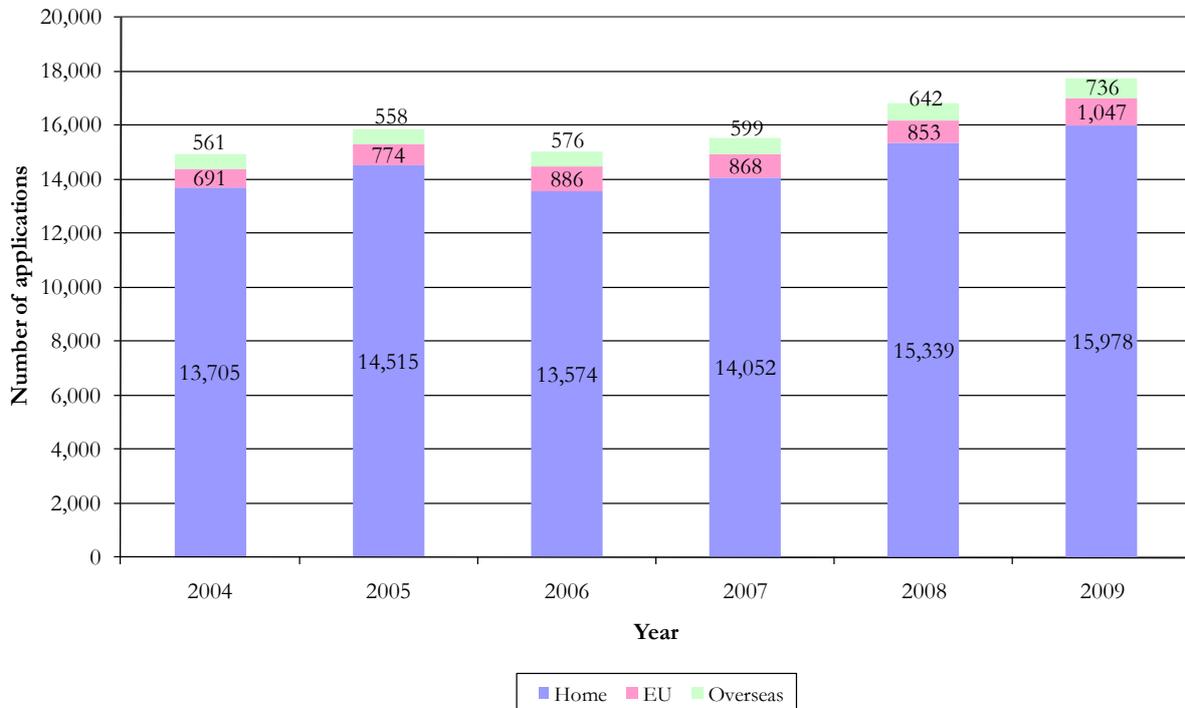


Source: UCAS

As one might expect, entry requirements vary considerably between institutions. They tend to be higher for degree courses at institutions with strong performance in research and lower at institutions with a teaching mission. For instance: UCL and Cambridge require A\*AA at A-level, including a science; Oxford and St. Andrews stipulate AAA; and Birmingham and Cardiff AAB. At universities with a lower research profile in the discipline, requirements are not as stringent. At Bolton, Coventry, Liverpool Hope, Middlesex, Sunderland and Thames Valley, the requirement is

between 200 and 280 ‘tariff’ points (equivalent to CDD – BBC at A2). Science, Psychology or Mathematics A-levels are not typically stipulated here. However the entry requirements for psychology at this latter set of institutions are higher than the mean tariff score of their first year cohort in all subjects, indicating that even at institutions with generally lower stipulated grades, psychology students tend to be more highly qualified than their peers on other courses.

**Figure 6.3: Applicants for psychology via UCAS by domicile, 2004 - 2009**



Source: UCAS

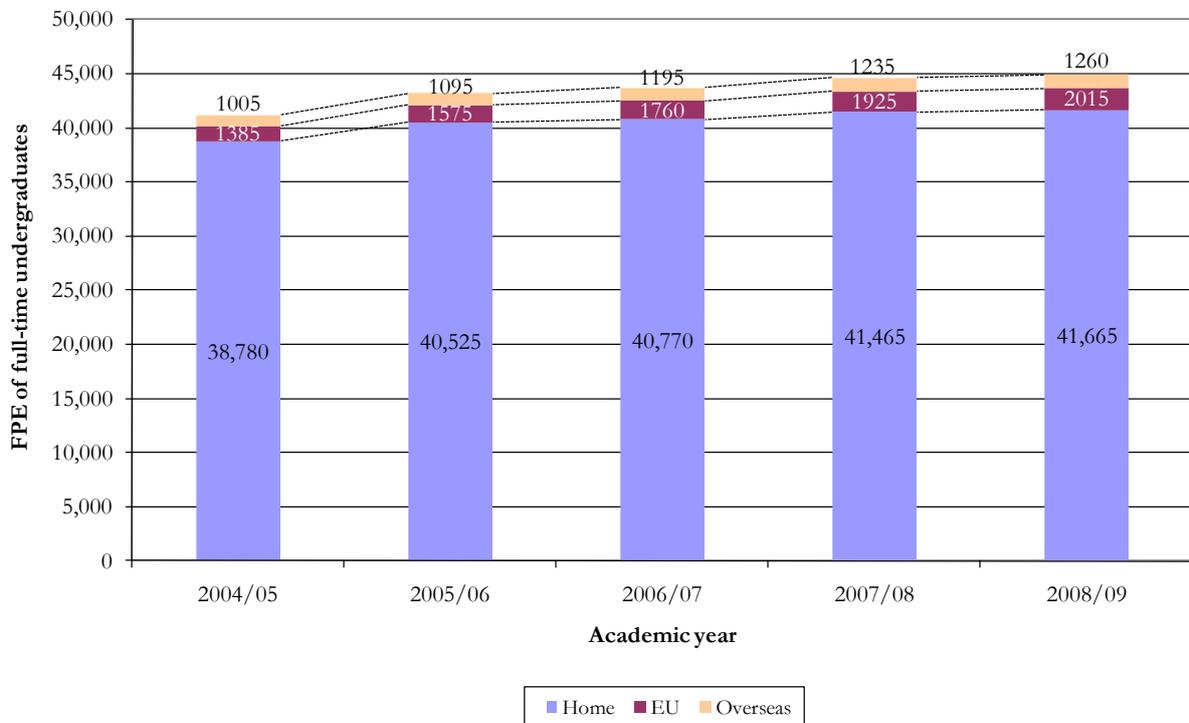
For 2009 entry, the ratio of male:female applicants for Psychology was 1:4. Approximate ratios for other subjects were: Anatomy 1:2; Anthropology 1:3; Aural and Oral Sciences 1:9; Biology 9:11; Economics 7:3; Education 1:9; Medicine 9:11; and Sociology 1:3. The overall gender ratio for all UCAS undergraduate applicants was about 9:11. About 16 per cent of Psychology applicants were classed as ‘mature’ (over 21 years of age) in 2009.

According to UCAS for 2009 entry, Psychology attracted 736 applications from overseas fee-payers, compared to 164 for Anatomy, 65 for Anthropology, 33 for Aural and Oral Sciences, 261 for Biology, 2,462 for Economics, 51 for Education, 2,151 for Medicine and 124 for Sociology. There were 468 overseas acceptances for Psychology in 2009. In addition there were 1,047 applicants for Psychology from the European Union (726 accepted applicants). EU application numbers grew 51 per cent between 2004 and 2009; overseas applications grew by 31 per cent; and home applications by only 17 per cent. The relative growth in EU applications is likely to reflect the change in the countries included in the category ‘EU’ following the 2004 and 2007 enlargements of the Union. Whilst applicants from outside the UK represent only a small proportion of the total applicants to Psychology, this is less a reflection on the quality of British undergraduate psychology programmes than the instrumental subject preferences of international applicants who gravitate to law, medicine, business studies, economics and engineering (both in the UK and elsewhere). Bearing this in mind, it appears that Psychology seems to attract quite a large number of non-UK applicants.

6.2 Undergraduate students<sup>19</sup>

There is a major drawback in interpreting student numbers provided by HESA in that they provide ‘full person equivalents’ (FPEs), not head counts. This means that two different students taking joint honours psychology ( $2 \times 0.5$ ) will be equivalent in the figures to one person taking a single honours degree ( $1 \times 1.0$ ). Since there are a large number of combined degrees incorporating psychology across higher education institutions in the UK, a headcount of all those taking some kind of psychology degree would give a larger population than the FPE figures suggest. However it is not possible, from publicly available information, to accurately determine how many students are studying joint honours or indeed what the most popular combinations are. A huge range of combined programmes are available. Judging by the number of times particular combinations are offered through the UCAS system, popular partner subjects for psychology include biological sciences, business, criminology, education, foreign languages, health studies, and sociology.

**Figure 6.4: FPE full-time first degree Psychology students, 2004/05 – 2008/09 by domicile**



Source: HESA Student Record 2004/05 - 2008/09

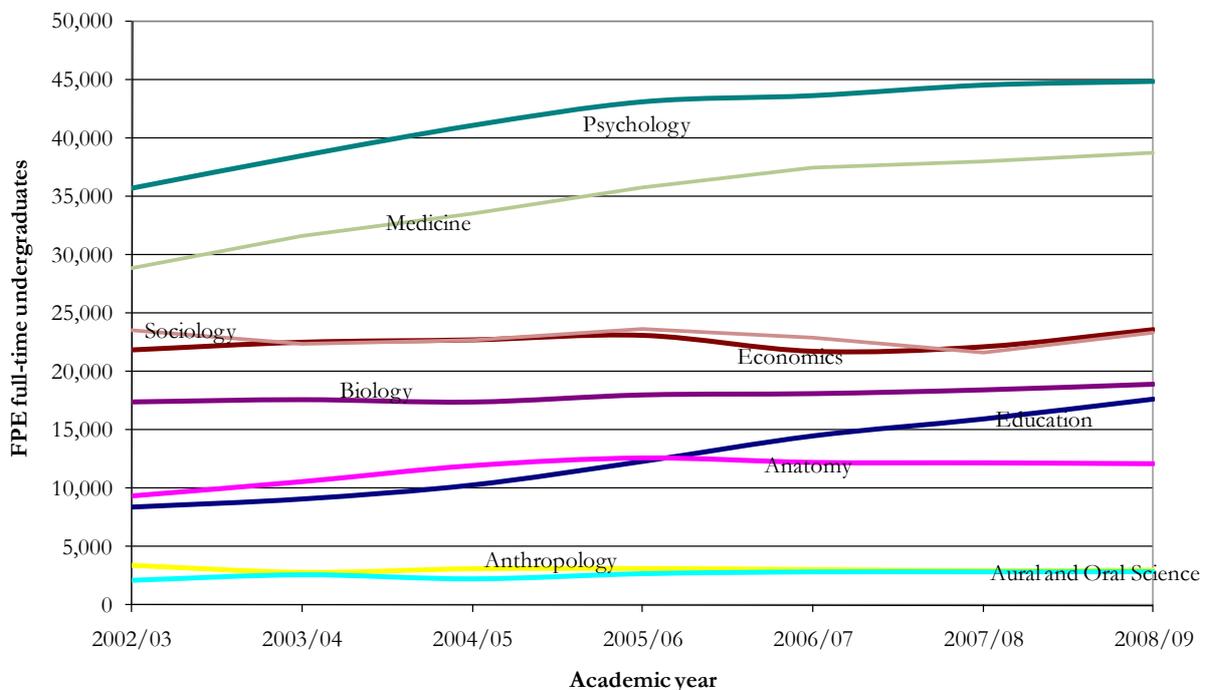
In 2008/09 there were 44,945 full- and 17,420 part-time FPE undergraduates studying Psychology. Whereas previously HESA distinguished between psychology as a science (category C8) and a social science (category L7), this distinction has been discontinued, with all psychology students now classified under the code C8. In the last year in which both categories were used (2001/02), there were 22,690 full-time undergraduates classified as “C8 Psychology (not solely as a social science)” and 6,000 in the category “L7 Psychology (without significant element of biological science)”. If treated as a social science, Psychology is larger than all individual subjects in HESA’s broader category of Social Studies, although the 2001/02 figures suggest this is probably an overstatement. If treated as a biological science, it is the single largest subject in the

<sup>19</sup> Data in sections 6.2 - 6.4 are obtained from the HESA Student Record. All HESA data reproduced in this report are subject to HESA’s rounding strategy which is described in the note at the end of the document.

category Biological Sciences. However it does seem rather unsatisfactory to split the discipline into component parts in this way, introducing an artificial binary divide not reflected in the content of undergraduate degrees in the subject.

Indeed, Psychology is one of the very largest disciplines as measured using HESA's categorisation. Only Nursing, Business Studies, Law, Computer Science and Design Studies are larger. It comprises about 3.5 per cent of all full-time undergraduate study. Moreover, Psychology has experienced sustained growth in full-time student numbers, with an increase seen in each year between 2002/03 and 2008/09 and an overall growth across the period of 25 per cent. Among the comparator subjects, only Anatomy, Medicine and Education have seen stronger growth rates, but with smaller absolute numbers. Medicine's trajectory is very similar to Psychology's.<sup>20</sup> Growth has been achieved in home, EU and overseas student numbers, although the large majority of Psychology students are UK-domiciled. The number of overseas students (who, being from outside the UK, are ineligible for state support and typically pay tuition fees of £10,000 and upwards) is relatively small as a proportion of the total. It is much lower than the proportion in Economics and also lower than Biology and Anthropology.

**Figure 6.5: FPE full-time undergraduate students, 2002/03 – 2008/09, selected subjects<sup>21</sup>**



Source: HESA Student Record 2002/03 - 2008/09

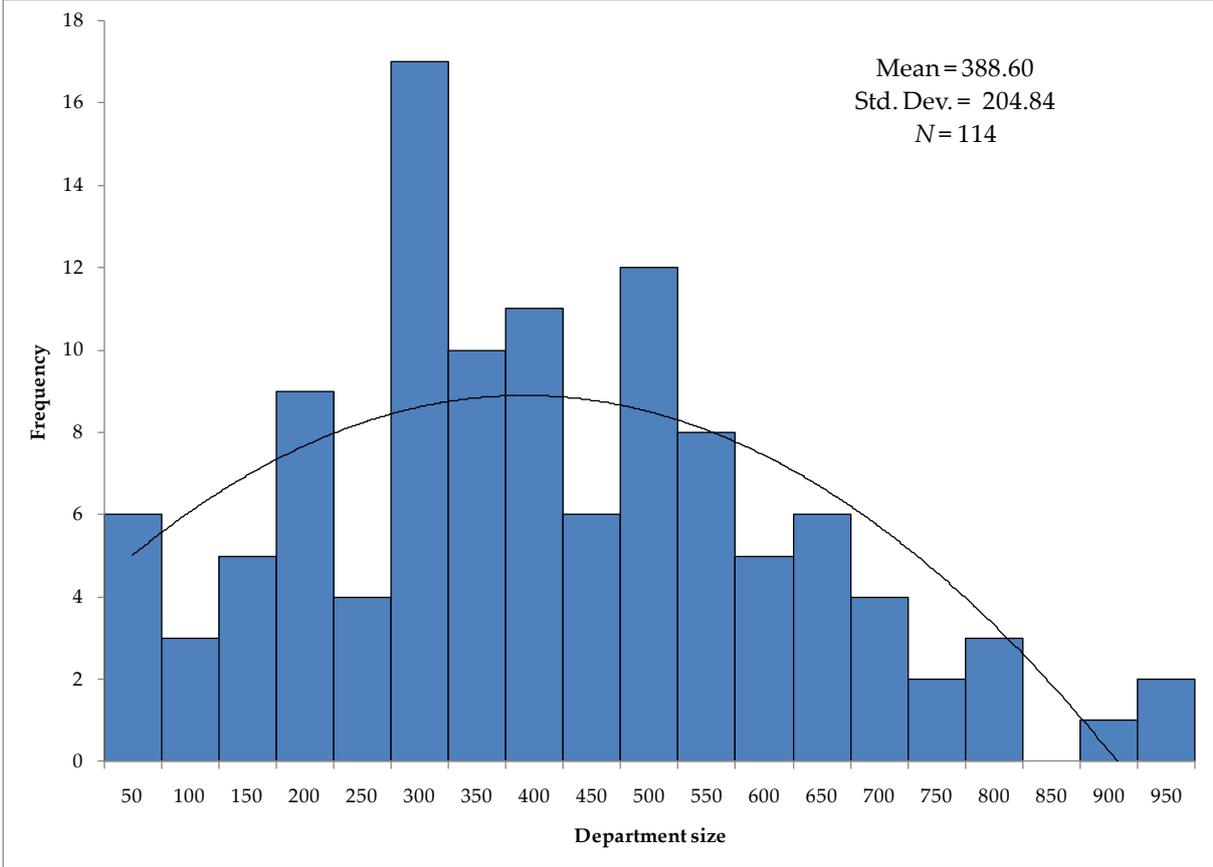
As already mentioned in respect of staff numbers, accurately describing the size of psychology departments is tricky. One approximation is to list the number of FPE psychology undergraduates at each institution (see Figure 6.6). Most institutions with full-time Psychology undergraduates have between 250 and 600 full-time first degree students. A small number of institutions have fewer than 100 undergraduates, which may indicate the absence of a named department of psychology. There are others with very large departments of over 600 undergraduates (which would mean, on a three-year degree programme, an intake of 200+

<sup>20</sup> However student numbers in Medicine are tightly controlled (e.g. in England by the NHS, General Medical Council and HEFCE). Psychology is not subject to the same cap.

<sup>21</sup> Medicine as reported in sections 6.2 – 7.2 is an aggregation of the HESA categories 'Pre-clinical Medicine' and 'Clinical Medicine'.

students each year). Institutions with over 700 FPE full-time undergraduates in Psychology include Manchester Metropolitan University, University of the West of England, Bristol, University of Manchester, University of Glasgow, Roehampton University, Bangor University, Nottingham Trent University and University of East London. Comparing the distribution of students across institutions with those seen in briefing documents for the previous International Benchmarking Reviews of Economics, Politics and International Studies and Sociology, it would seem that psychology departments are more likely to be medium-to-large in size than in the former disciplines.

**Figure 6.6: Histogram of FPE Psychology full-time first-degree undergraduates by department, 2008/09**

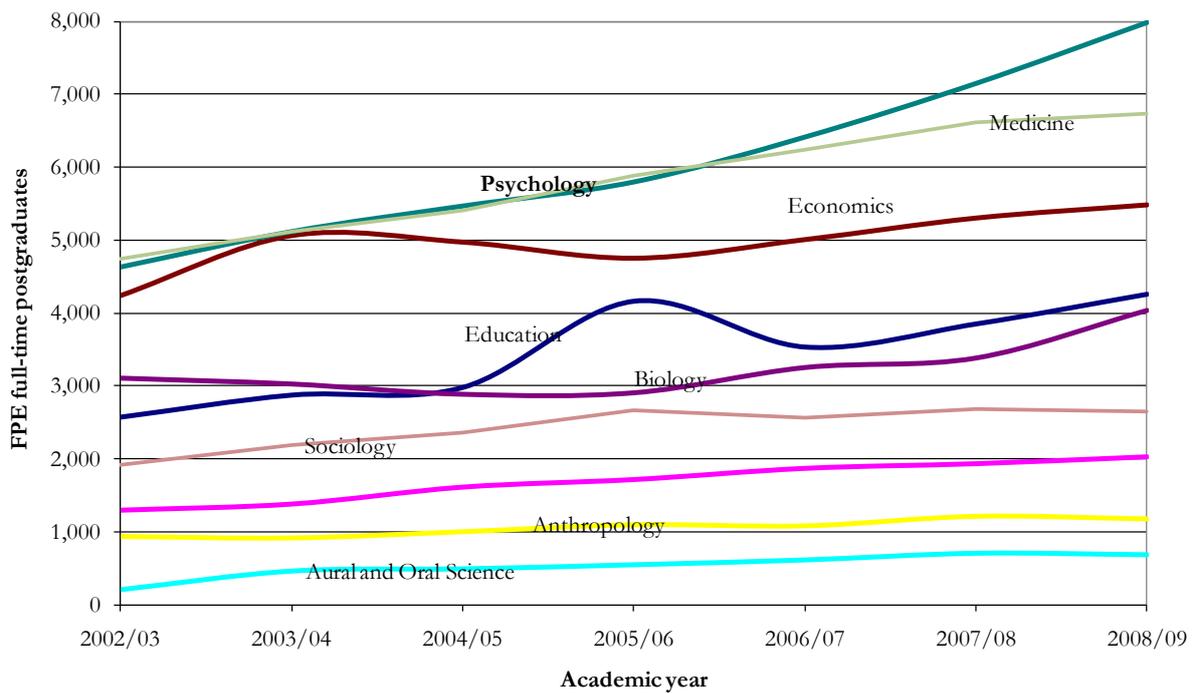


Source: HESA Student Record 2008/09

6.3 Postgraduates

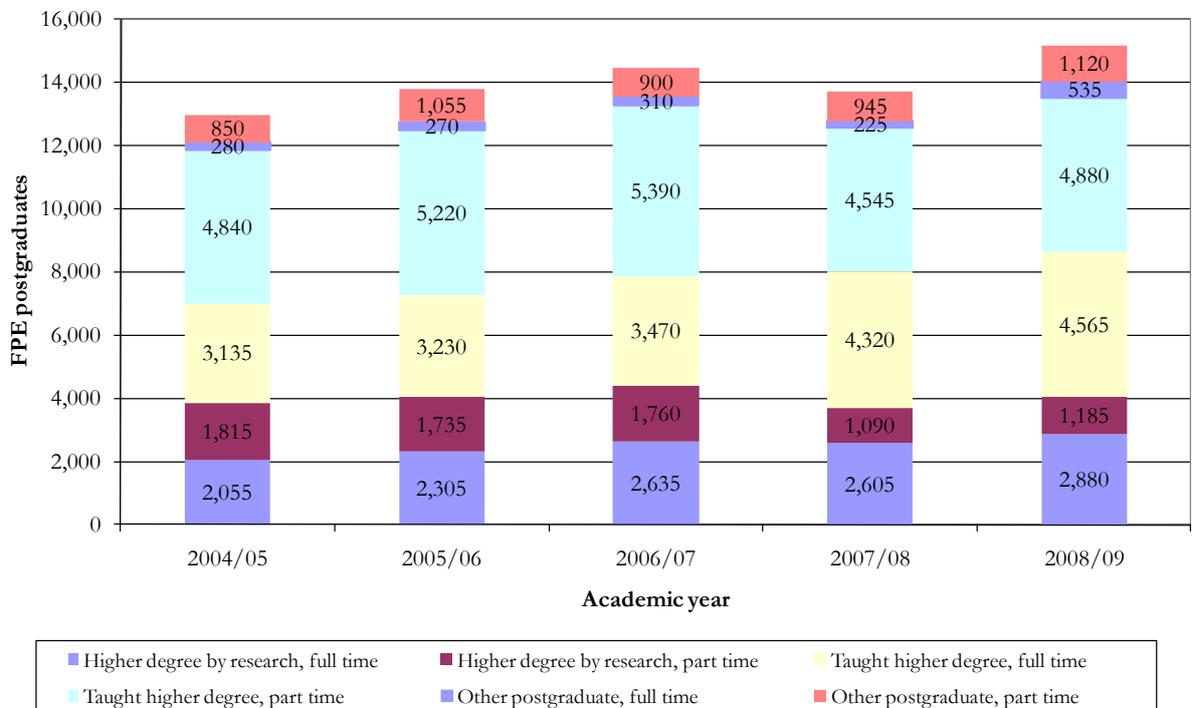
In 2008/09 there were 7,985 full-time and 7,185 part-time FPE postgraduate students in Psychology. This makes Psychology larger than all its comparator subjects, except for Education which has very large numbers of part-time postgraduate students and, marginally, Medicine. Full- and part-time Psychology postgraduate FPEs have grown by 72 per cent and nine per cent respectively between 2002/03 and 2008/09. As Figure 6.7 shows, growth in full-time postgraduate numbers has been both sustained and sharper than in comparator subjects across the period (Medicine again tracks Psychology very closely, but trails off towards the end of the period in question). In 2008/09, FPE Psychology students comprised about three per cent of both full-time and part-time postgraduates. There are no national data available about numbers of applications for postgraduate programmes in psychology.

**Figure 6.7: FPE full-time postgraduate students, 2002/03 – 2008/09, selected subjects**



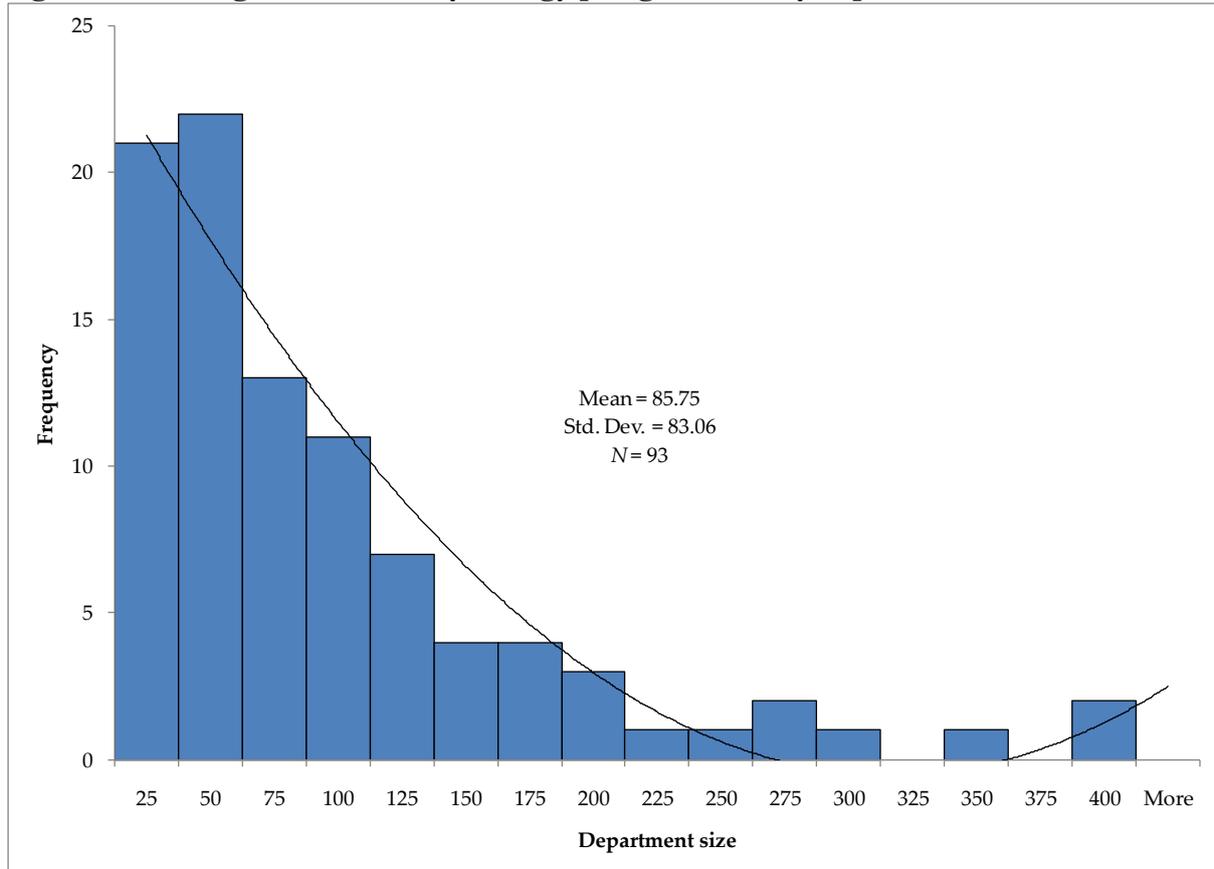
Source: HESA Student Record 2002/03 - 2008/09

**Figure 6.8: FPE postgraduate students in Psychology by mode and level of study, 2004/05 – 2008/09**



Source: HESA Student Record 2004/05 - 2008/09

**Figure 6.9: Histogram of FPE Psychology postgraduates by department, 2008/09**



Source: HESA Student Record 2008/09

The division between taught and research postgraduates in Psychology is shown in Figure 6.8. Like Sociology, Psychology shows a reasonably even split between taught (MA/MSc) and research degree (largely PhD) study. Very few are taking an ‘other’ postgraduate qualification (typically diplomas and certificates). In Biology full-time research students dominate, whereas in Economics the modal student is taking a full-time masters degree. Full-time research student numbers in Psychology have grown over the five-year period, although part-time numbers in this category have declined somewhat. There has been growth in full-time masters study in the discipline, but part-time numbers have remained steady.

There are a number of institutions with quite large numbers of postgraduates in Psychology. Birmingham, Exeter, Hertfordshire, London Metropolitan, Manchester, Nottingham, Sheffield, Surrey and University College London each have over 200 postgraduates. Nottingham Trent, which has the joint largest number of Psychology full-time undergraduates (over 900) has less than 60 postgraduates, although the other joint top institution, University of East London has 160. Overall, just under one fifth of Psychology students are postgraduates, but the precise proportion varies by institution somewhat. University College London is over 50 per cent postgraduate and Cambridge, London Metropolitan, Nottingham, Sheffield and Surrey are all 40 per cent or more postgraduate. It is not however the case that all the major research-led departments are skewed towards postgraduate provision. There is also only a very weak positive correlation between undergraduate and postgraduate numbers too ( $r^2 = 0.36$ ). Figure 6.9 clearly shows that there are a large number of departments with few postgraduates and a small number of departments with many postgraduates.

Aggregate data on research students in Psychology in 2007/08 show an international student presence, but with UK students making up a large majority (more than 70 per cent). This is a little unusual in the social sciences, where international students tend, relatively speaking, to be more numerous. Research students in Psychology hail from some 90 different countries. This includes 25 of the 27 EU member states (only Slovakia and Lithuania are not represented). Ireland has the single biggest representation, followed (in order) by Greece, Germany, USA, Italy, China, Portugal, Canada, Netherlands, India and Australia. The numbers for China and India are relatively low (these are two of the largest providers of international research students). Viewed in terms of ‘market penetration’,<sup>22</sup> Ireland is by far the biggest provider of research students, then Portugal, with Greece following.

No reliable social class data are available on postgraduate psychology students. However ethnicity and gender data were procured for doctoral students for 2007/08. Some 73 per cent of UK-domiciled research students in Psychology were female, compared to 81 per cent of undergraduates in the same year. Recall that 66 per cent of staff aged under 35 are female. Less than half of UK-domiciled research students in Psychology were aged over 30 in 2007/08, with some 16 per cent in the 21 – 24 age bracket. This is a relatively young age profile for the social sciences, but less so for natural science disciplines where immediate entry from a first-degree tends to be more common.

Table 6.1 sets out the ethnic background of UK-domiciled research students in Psychology. The proportion of non-white students is relatively low in Psychology compared to other social sciences: it is lower than in Economics, Sociology and Anthropology, but around the same as Education. Unfortunately, no data is available for other comparators, nor is there data available on undergraduate students in Psychology.

**Table 6.1: Ethnic group of Psychology research students, 2007/08, where known**

<b>Ethnic group</b>	<b>Female</b>	<b>Male</b>	<b>Total</b>
	<b>%</b>	<b>%</b>	<b>%</b>
White	90.7	88.2	90.0
Black or Black British - Caribbean	1.0	1.0	1.0
Black or Black British - African	0.7	1.0	0.8
Other Black background	0.2	0.2	0.2
Asian or Asian British - Indian	2.2	1.9	2.1
Asian or Asian British - Pakistani	1.0	0.3	0.9
Asian or Asian British - Bangladeshi	0.0	0.2	0.0
Chinese	0.4	0.8	0.5
Other Asian background	0.9	1.6	1.1
Other (including mixed)	2.8	4.9	3.4
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

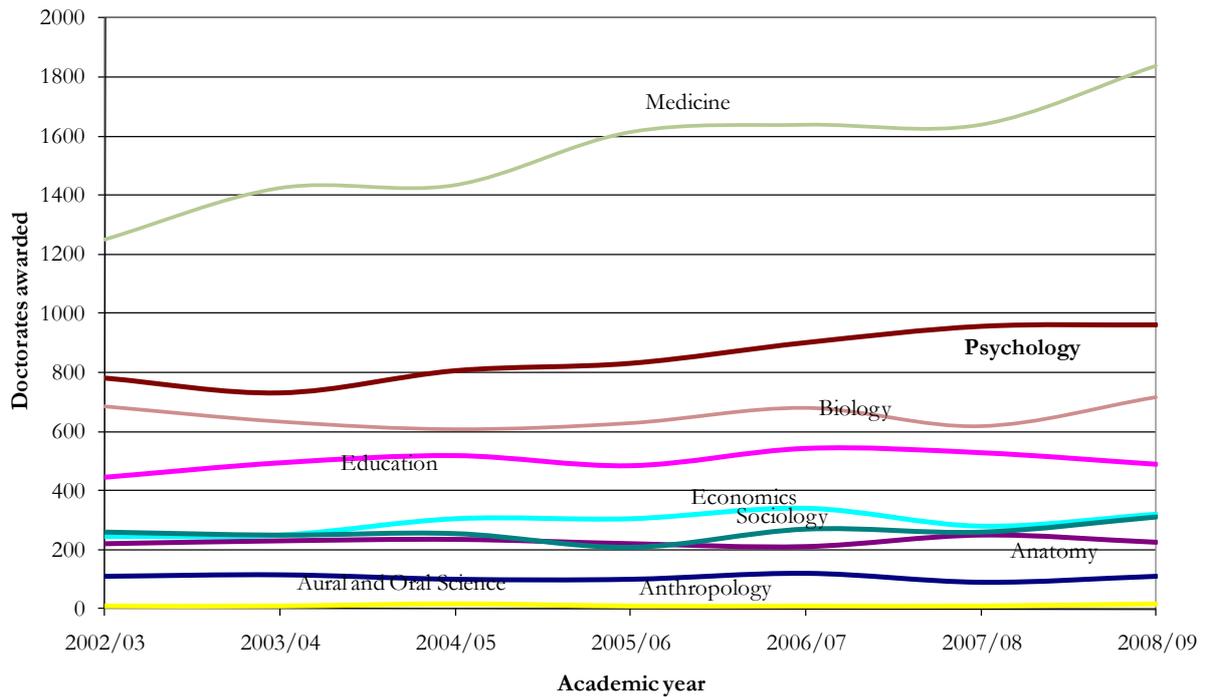
Source: HESA Student Record 2007/08

<sup>22</sup> This is a crude calculation of the number of research students of a particular nationality per head of population in the ‘home’ nation (based on CIA Factbook population estimates for 2010).

## 6.4 Doctorates awarded<sup>23</sup>

Data are available on the doctorates awarded in Psychology and comparator disciplines (see Figure 6.10). In most of Psychology's comparator disciplines, there has been little overall change in the number of doctorates awarded over the period: the overall impression is one of 'trendless fluctuation', with an element of random variation from year to year. Given that student numbers in general have grown across the period though, the stability of doctoral awards implies a relative decline. In Psychology and in Medicine however, numbers have risen steadily across the period. Indeed Psychology is now the third largest discipline in HESA's categorisation according to the number of doctorates awarded (behind Clinical Medicine and Chemistry).<sup>24</sup>

**Figure 6.10: Doctorates awarded in selected social science disciplines, 2002/03 – 2008/09**



Source: HESA Student Record 2002/03 – 2008/09

<sup>23</sup> Doctorates here *include* both 'taught' (i.e. professional such as DClInPsych) and 'research' (i.e. traditional such as PhD) doctorates.

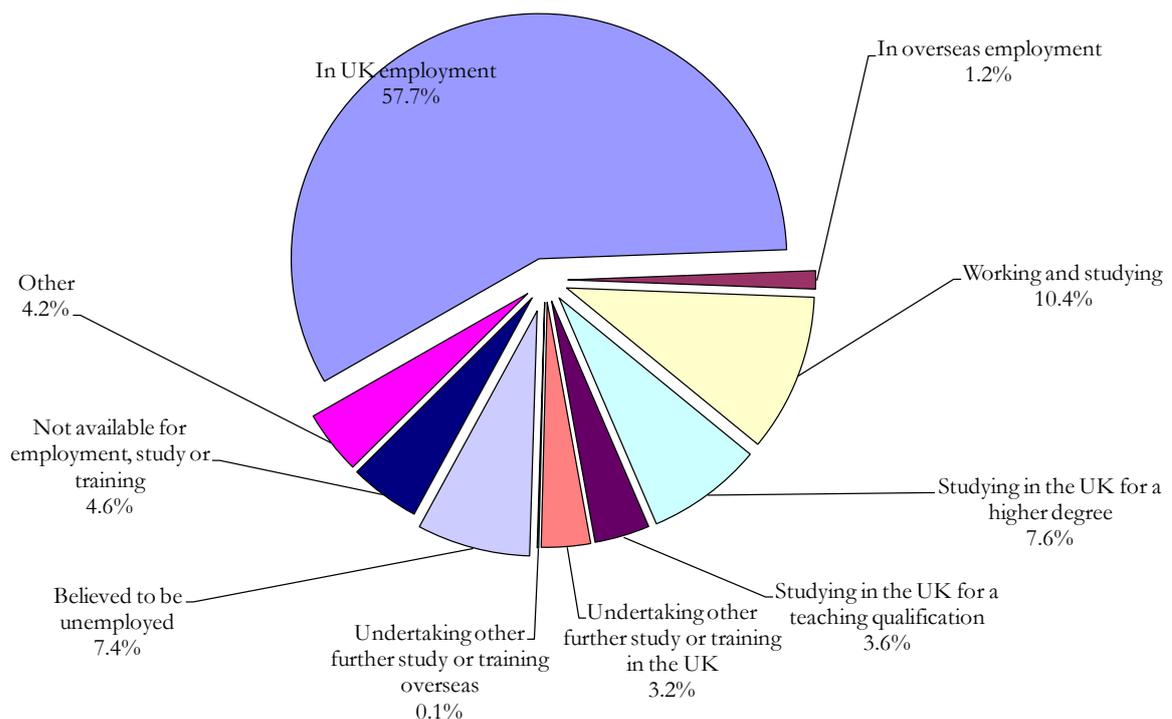
<sup>24</sup> If the component parts of the biological sciences (Biology, Botany, Zoology, Genetics, Microbiology, and Molecular Biology, biophysics and Biochemistry) are aggregated, their total doctorates awarded for 2008/09 was 1,415.

## 7 Careers

### 7.1 First degree graduates<sup>25</sup>

Most UK-domiciled Psychology graduates obtain employment or enter further study (or both) within six months of their graduation. Around 7.4 per cent were unemployed and looking for work in 2008/09. Psychology graduates were slightly less likely to be unemployed than graduates in Biology, Sociology, Economics and Anthropology, but more likely than Anatomy, Education and Aural and Oral Sciences graduates. Medicine graduates were particularly unlikely to be unemployed (around 0.3 per cent). The mean unemployment rate for all first-degree graduates in 2007/08 was 7.9 per cent. Psychology graduates find employment in a range of occupations, some of which would not be considered 'graduate' occupations. In 2007/08, the most popular employment categories for Psychology graduates were 'Other occupations' (23.8 per cent), 'Social and welfare professionals' (13.9 per cent), 'Other clerical and secretarial occupations' (13.7 per cent), 'Retail, waiting and bar staff' (13.7 per cent) and 'Commercial, industrial and public sector managers' (8.1 per cent). Some 2.0 per cent of Psychology graduates became Psychologists in 2008/09, the largest single occupation which would ordinarily be considered 'graduate-level'.

**Figure 7.1: Destination of Psychology first-degree graduates 2008/09, where known**



Source: HESA Destination of Leavers from Higher Education survey, 2008/09

These 'first destination' data are limited in that they provide a snapshot at a very early point in a graduate's career of their employment situation. A recent report for the BPS notes this issue for the discipline of psychology where "further study and experience is almost always required in order to be a professional psychologist"<sup>26</sup>. Based on an eight per cent sample ( $n = 430$ ) of Psychology first-degree graduates in 2000, the researchers found an unemployment rate of just

<sup>25</sup> For further information on this subject, see the *Future Prospects* website at: [http://www.prospects.ac.uk/what\\_do\\_graduates\\_do\\_psychology.htm](http://www.prospects.ac.uk/what_do_graduates_do_psychology.htm)

<sup>26</sup> Van Laar, D. and Udell, J. (2008) *BPS Graduate 2000 Project: Career Destinations of Year 2000 Psychology Graduates*. Portsmouth: BPS and University of Portsmouth Applied Psychology Unit, p. 2.

1.2 per cent, with 96 per cent working in professional psychology or occupations related to psychology. Over three quarters of respondents were working in the public sector. However the sampling frame used was members of the BPS who gained their first degree in 2000: since this is a self-selecting group, it is unlikely to be representative of all Psychology graduates from 2000. At the very least however it is possible to state that a minimum of  $0.08 \times 0.96 \approx 7.7$  per cent of year 2000 Psychology graduates were working in psychological professions by summer 2007.

Research on the financial returns to different first degrees using data from the Labour Force Survey<sup>27</sup> estimates that Psychology graduates enjoy a return (in terms of wages) which places them seventeenth for men and 21<sup>st</sup> for women out of 25 disciplines.

## 7.2 *PhD graduates*<sup>28</sup>

Research indicates that the majority of social science PhD holders move into academic employment. However an increasing minority pursue other career options outside of university teaching and research: recent information found around one third working in non-academic settings,<sup>29</sup> a proportion which has been constant for several years.<sup>30</sup> In Biological Sciences doctoral graduates are much more likely to remain in research (between 60 and 70 per cent, just over half of which is in the university sector); the figure is lower in Biomedical Sciences (a group which includes Psychology). Biomedical doctoral graduates have the lowest unemployment rate of all doctoral graduates (2 per cent). Half of Biomedical Sciences doctoral graduates were employed in the health and social work sector.<sup>31</sup>

Turning to PhD graduates in Psychology specifically, research by Vitae<sup>32</sup> which summarises the first destinations for doctoral graduates in the discipline in the period 2003 – 2007, showed 55 per cent of those entering employment worked as ‘Health professionals and associate professionals’, with nearly 14 per cent working as ‘Other professionals’ and the same proportion as ‘Education and teaching professionals’. Only ten per cent entered a research occupation. This suggests that Psychology’s profile as a doctoral subject fits that of the other Biomedical Sciences rather than the social science subjects. However the inclusion in this report of students taking professional doctorates (principally the DClinPsych) muddies the waters somewhat. Such students are typically aiming for employment in clinical practice rather than research.

Data has been procured on the first destination of those obtaining doctoral degrees by research only for 2008/09.<sup>33</sup> Only 1.9 per cent were unemployed, with 78.3 per cent in full-time employment.<sup>34</sup> Only a small proportion enter self-employment (5.4 per cent) and 8.4 per cent are employed part-time. One third of the doctoral graduates were employed in higher education, with roughly a further third in health and medical employment of some kind. Few appear to have entered research outside the university sector. The remainder were distributed across a wide

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<sup>27</sup> O’Leary, N. C. and P. J. Sloane (2005) The return to a university education in Great Britain. *National Institute Economic Review*, 193 (1), pp. 75 – 89.

<sup>28</sup> Separate information is not available on masters graduates in Psychology.

<sup>29</sup> Purcell, K. and P. Elias (2006) *The employment of social science PhDs in academic and non-academic jobs: research skills and postgraduate training*. Swindon: ESRC; Vitae (2009) What do social science researchers do, available at: <http://www.vitae.ac.uk/1367/Social-sciences.html>.

<sup>30</sup> UK Grad Programme (2004) *What do PhDs do? 2004 analysis of the first destinations for PhD graduates*. Cambridge: Graduate Prospects.

<sup>31</sup> Haynes, K., Metcalfe, J. and Videler, J. (2009) *What Do Researchers Do? First Destinations of Doctoral Graduates by Subject*. Cambridge: Vitae.

<sup>32</sup> Ibid.

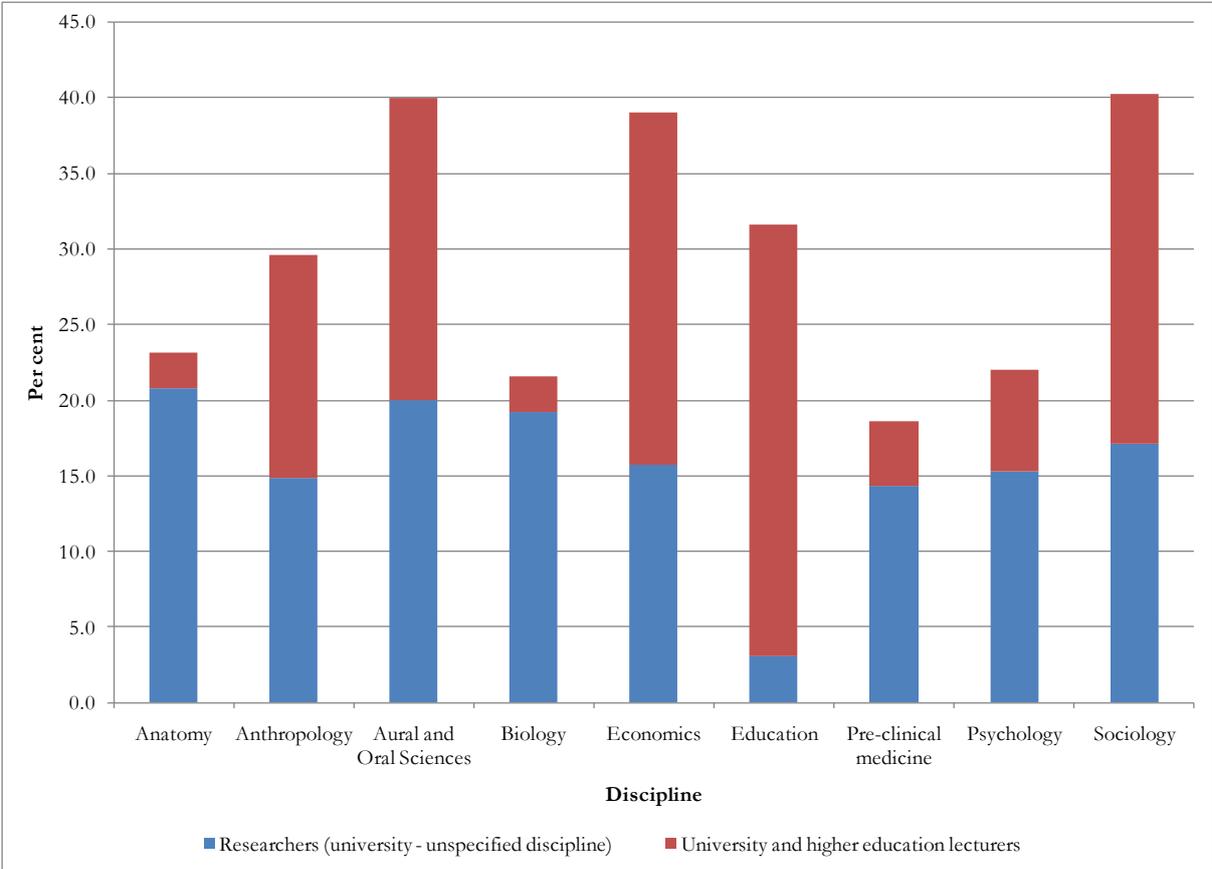
<sup>33</sup> Students on DClinPsych programmes are conventionally classified as taking a ‘taught’ doctorate, since the thesis element does not comprise the sole form of assessment, unlike the traditional PhD/DPhil.

<sup>34</sup> This data covers UK and EU-domiciled graduates only.

range of industries, across the public, private and voluntary sectors. The most commonly cited specific occupations were ‘Clinical psychologists’ (27 per cent), ‘Researchers (university – unspecified discipline)’ (15 per cent), ‘Psychologists’ (11 per cent) and ‘University and higher education lecturers’ (7 per cent).

Figure 7.2 shows clearly that the career path of Psychology doctoral graduates tends not to follow that of comparator social science disciplines, where a far higher proportion of graduates enter university teaching. This may reflect a broader purpose for psychology doctorates (entry into non-‘academic’ psychology) than in other disciplines, where there are less obvious career paths for doctoral graduates outside of the academy. It could also result from higher levels of pay in clinical practice than in research.<sup>35</sup>

**Figure 7.2: Research doctorate graduates 2008/09 in selected subjects entering higher education teaching and research (where destination known)**



Source: HESA Destination of Leavers from Higher Education survey, 2008/09

<sup>35</sup> Mills *et al.*, op. cit.

## 8 Concluding comments

Writing in 2005, Mills et al concluded, in the *Demographic Review of the Social Sciences* (op. cit.) that psychology is “on the whole [...] a healthy, vibrant and strongly research active discipline.” (p. 68). Little in this brief statistical overview would challenge that judgement. Psychology emerges as a large discipline with what appears to be a promising future: it has experienced sustained growth in student and staff numbers and research income, has a relatively young demographic profile among university-based teaching and research staff and strong links with professional practice. It exports its doctoral graduates to other subjects and into the psychology profession outside the academy. If there are any issues for concern, these relate to the demographic diversity of the discipline; something of a ‘tail’ of research performance as measured in the RAE; and perhaps a risk that higher salaries outside of academic research will siphon off the most talented individuals.

From a vantage point within the UK, and considering psychology alongside other disciplines nationally, the discipline has both critical mass and an apparent coherence. As has been noted throughout this commentary, psychology does not fit readily into conventional disciplinary definitions such as ‘natural science’ or ‘social science’, meaning its activity is spread across different funding bodies. This carries a risk of fragmentation, but the impression given is rather of a discipline enjoying the ‘best of both worlds’.

## APPENDIX 1

### Full details of current ESRC-funded projects in Psychology

Type of award/Title	Institution	Date	Amount
<i>Collaborative research</i>			
Social Inequality and Children's Mental Health	King's College London	April 2010 - March 2014	£209,414
<i>First grants scheme</i>			
Psychological Processes in Depression: Interpretation Bias and Mental Imagery	University of Oxford	November 2006 - October 2010	£315,458
Moderators of Social Categorisation: How Knowledge, Goals and the Interaction Context Shape Person Construal	University of Birmingham	January 2007 - June 2010	£308,113
Action and interaction in the social brain	University of Nottingham	November 2007 - February 2011	£275,500
Negotiating managed consumption: Young people, branding and social identification processes	University of Bath	October 2007 - September 2010	£266,652
Exploring cross-cultural values of 'informed choice' in antenatal genetic screening using Q methodology	University of Leeds	January 2008 - January 2011	£331,764
Ageing, Visibility and Ignoring	University of Birmingham	January 2008 - January 2011	£320,468
Fractionating the Musical Mind: Insights From Congenital Amusia	Goldsmiths College	January 2008 - December 2011	£326,175
A multilevel approach to understanding the aetiology of work-related health and well-being: Linking individual and organisational factors	Nottingham Trent University	April 2009 - September 2011	£264,778
Looking for myself: interactions between multisensory integration and recognition of one's own face	Royal Holloway, Univ of London	January 2009 - December 2011	£297,455
Poor Psychological Detachment from Work During Leisure Time: Antecedents, Implications for Employee Well-Being, and Intervention Effects	City University	January 2009 - June 2010	£82,412
Resilience, Adversity and Affective Processing in Childhood	University College London	March 2009 - February 2012	£313,760
Eye Say: Investigating language production processes in typical and atypical development	Royal Holloway, Univ of London	February 2010 - January 2013	£328,497
Reducing prejudice via indirect intergroup contact	University of Leeds	June 2010 - November 2012	£251,877
Auditory processing and language in children with mild to moderate sensorineural hearing loss.	University College London	January 2010 - June 2012	£217,651
Embodied Moral Judgments and Behaviours in Real and Virtual Environments	University of Cambridge	September 2009 - September 2010	£124,892
The Role of Psychological Adjustment in the Evolution of Chronic Insomnia	Northumbria University	October 2009 - April 2011	£149,045
<i>Large grants scheme</i>			
Psychological Processes in Depression: Interpretation Bias and Mental Imagery	University of Oxford	November 2006 - October 2010	£315,458
Moderators of Social Categorisation: How Knowledge, Goals and the Interaction Context Shape Person Construal	University of Birmingham	January 2007 - June 2010	£308,113

Type of award/Title	Institution	Date	Amount
<i>Full research award</i>			
Development and evaluation of a Behavioural Intervention Grid (BI-Grid)	University of Southampton	May 2008 - April 2011	£638,627
Developing Skills for Government: Political Mentoring	City University	October 2009 - September 2010	£80,102
UK Social Cognition Network	University of Kent	August 2009 - July 2011	£32,239
Improving the delivery of justice for victims, witnesses and society: Field Trials of the Self Administered Interview Recall Tool	University of Abertay Dundee	January 2010 - October 2010	£28,738
Making the best use of video identification parades and meeting the needs of vulnerable witnesses	Royal Holloway, Univ of London	July 2010 - July 2011	£70,638
<i>Placement fellows</i>			
Behaviour change for policymaking and delivery.	University of Reading	February 2010 - October 2010	£60,807
<i>Postdoctoral fellowships</i>			
Investigating cognitive subtypes in the autism spectrum	University College London	August 2007 - July 2010	£155,340
Habitual Behaviour and Weight Control	University College London	January 2008 - April 2010	£92,539
The relationship between imitation and social skills and disabilities	King's College London	February 2009 - November 2010	£84,405
The psychology of power: Neurological and psychosomatic markers of control	University of Kent	February 2009 - April 2010	£87,586
Understanding children's written language comprehension through eye movements	University of Oxford	March 2009 - February 2011	£81,081
International students in the UK: Adaptation and well-being	University of Exeter	June 2009 - May 2010	£72,796
Awareness of number marking during reading and spelling	University of Birmingham	March 2010 - February 2012	£78,670
Investigation of contrast effects in children with autism	King's College London	July 2009 - February 2011	£89,031
Social Cognition in Typically Developing Individuals and those with Autism Spectrum Disorders using EEG and Eye-tracking Techniques	University of Sheffield	September 2009 - September 2010	£72,426
Does learned categorical perception of previously unfamiliar faces generalize across different views?	University of Essex	August 2009 - July 2010	£70,709
The development of face processing: closing the gap between childhood and adulthood with a cohort of adolescents	University College London	October 2009 - September 2010	£78,841
PostDoctoral Fellowship: Lifestyle factors affect human skin colouration, and are perceptible to observers	University of Bristol	September 2009 - August 2010	£77,739
Simulation Processes in Social Cognition: The Role of 'Classical' and 'Extended' Mirror Systems	University College London	October 2009 - October 2010	£87,728
The role of sleep in off-line consolidation of meanings in newly learnt words	The University of Manchester	April 2010 - March 2011	£81,344
<i>Professorial Fellowship</i>			
Social identity theory extended: A SITE map for understanding intergroup relations	Cardiff University	March 2009 - February 2012	£228,374
<i>Programme Fellowship</i>			
Risk Perception, Climate Change and Public Engagement	Cardiff University	October 2008 - October 2011	£246,885

Type of award/Title	Institution	Date	Amount
<i>Programme Fellowship (contd.)</i>			
External provision of people's decision making needs: Effectiveness, appropriateness, and psychological demands of different levels of support.	University College London	May 2009 - April 2010	£88,524
<i>Research Career Fellowship</i>			
Translating Intentions into Behaviour: Identifying the Neural Correlates of Commitment and Imagery Perspective in the Formation of Implementation Inte	University of Reading	February 2010 - May 2010	£4,850
<i>Research Fellowship</i>			
Neural and behavioural consequences of vocabulary acquisition: an interdisciplinary approach	University of York	October 2007 - September 2010	£271,601
Specific language impairment (SLI): Distinctiveness, commonalities and developmental trajectories in subgroups	The University of Manchester	October 2007 - December 2010	£508,674
Testing formal single- and dual-system models of recognition, priming and fluency	University College London	December 2007 - November 2010	£226,608
From language-mediated eye movements to goal-directed action: Mapping language onto perception and action	University of York	October 2008 - September 2011	£303,765
Maternal identities, care and intersubjectivity: A psycho-social approach	Open University	October 2008 - March 2011	£280,610
Is eye contact the key to the social brain?	Birkbeck College	November 2008 - November 2011	£228,898
Rumination, goals and autobiographical memory	University of Exeter	September 2009 - August 2011	£166,081
Modelling the (expert) mind	Brunel University	May 2009 - April 2012	£321,261
<i>Research Grant (small)</i>			
Bilateral Australia: Solving the passport problem: Re-designing photo-ID to improve recognition	University of Glasgow	May 2008 - April 2010	£81,097
Can Values Reduce Prejudice Even when Identification is High?	Royal Holloway, Univ of London	October 2008 - September 2010	£82,091
Bilateral Netherlands: Scanpaths when viewing faces	University of Bristol	September 2008 - August 2012	£78,348
Associative influences on the apparent recency of encounters with perceptual objects.	University of Exeter	December 2008 - May 2010	£80,245
Bilateral Australia: Making a difference? Understanding the impact of criticism on groups.	University of Kent	July 2008 - June 2010	£80,916
Uncovering the sources of arithmetic	University of Nottingham	April 2009 - April 2010	£72,257
Visual representations in object substitution masking	Oxford Brookes University	January 2009 - April 2010	£80,271
Lexical influences on verbal short-term memory: composition and frequency characteristics of lexical neighbourhoods	University of Bristol	March 2009 - April 2010	£74,436
Using electroencephalography to characterise shallow processing in language comprehension	University of Glasgow	January 2009 - April 2010	£81,029
Sexual understanding and development of young people with intellectual disabilities: mothers' perspectives.	University of Glasgow	January 2009 - June 2010	£81,797
Social Motivation in Autism Spectrum Disorders	King's College London	September 2009 - August 2010	£79,438

Type of award/Title	Institution	Date	Amount
<i>Research Grant (small) (contd)</i>			
Can Experience Change the Other Race Effect?	University of Sheffield	February 2009 - January 2011	£67,294
Morality in Sport: A Social Neuroscience Perspective	University of Birmingham	January 2009 - October 2010	£82,750
Bilateral Australia: Interviewing eyewitnesses: Enhancing output quantity and diagnosing accuracy	University of Portsmouth	October 2009 - October 2010	£81,282
Inattentive deafness: A study of the consequences of auditory inattention	Royal Holloway, Univ of London	July 2009 - June 2010	£79,107
Everyday functional ability in the elderly: assessment and inference using brief cognitive tasks	University of Reading	October 2009 - December 2010	£80,305
Using Rotated Text to Investigate Cross Cultural Differences in Reading	University of Reading	January 2010 - December 2010	£76,206
Integration of cognitive information into visually guided action during tool-use by patients with ideomotor apraxia.	University of Nottingham	April 2009 - March 2012	£83,548
The psychology of credit card repayments	University of Warwick	April 2009 - August 2010	£79,371
Identifying the wider, non-linguistic, benefits of gestural communication with infants.	University of Hertfordshire	February 2009 - April 2010	£81,631
Exploring cultural impact on segmentation and first word recognition	University of York	May 2009 - July 2010	£86,557
Social-psychological Predictors of Support for Terrorism: A Multi-level Analysis	Cardiff University	April 2009 - October 2011	£83,828
The effect of labels on category formation in infancy	Oxford Brookes University	October 2009 - January 2011	£82,655
Population-based investigation of behaviour problems and parental well-being in children with autistic spectrum disorders	Bangor University	March 2009 - November 2010	£82,014
When something is missing: can absence of evidence be evidence of absence?	University College London	September 2009 - July 2010	£80,968
'Bilateral (Hong Kong):' Gaze strategies of laparoscopy surgeons: Observational learning, implicit knowledge and performance in demanding conditions	University of Exeter	October 2009 - September 2011	£66,590
Does making people think they are at risk, or making them feel afraid or worried, change their behaviour? Analysing the experimental evidence	University of Sheffield	June 2009 - November 2010	£78,644
Recalling and recognizing faces of other-races: A behavioural and eye movement study	University of Teesside	September 2009 - December 2010	£79,312
Is perceived colour altered when we move our eyes?	Cardiff University	March 2009 - June 2010	£82,039
Producing words in connected speech: the role of prosodic units	University of Birmingham	August 2009 - June 2010	£80,223
How do readers code letter position?	Royal Holloway, Univ of London	September 2009 - December 2010	£81,104
Visual encoding and age-related deficits in object location memory: Evidence from eye movements	University of Southampton	June 2009 - July 2010	£79,967
Modality-specific representations in conceptual combination	The University of Manchester	April 2009 - May 2010	£80,983

Type of award/Title	Institution	Date	Amount
<i>Research Grant (small) (contd)</i>			
Hormonal fluctuations across the menstrual cycle and their impact on speech: A data mining, modelling and resource generation project	University of Sheffield	June 2009 - June 2010	£77,028
Managing social environment for reducing obesity in middle-aged and older adults	University of Nottingham	January 2010 - January 2011	£76,500
Reading fluency in normally developed and dyslexic reading: how important is parafoveal versus foveal processing?	University of Edinburgh	August 2009 - July 2010	£79,881
Can groups stave off fatigue? The effects of group monitoring upon fatigue induced cognitive impairment	London South Bank University	August 2009 - January 2011	£21,791
Supernumerary me: An investigation into body representation	University of Nottingham	August 2009 - October 2010	£80,333
Phonological representations in bidialectal listeners	University of Plymouth	October 2009 - September 2010	£79,578
Mother-infant interactions in high-risk autism siblings	The University of Manchester	November 2009 - May 2011	£79,807
Investigating orthographic effects on speech perception and speech production using a word learning approach	Royal Holloway, Univ of London	July 2010 - June 2011	£79,061
The role of retrieval processes in false recognition	Lancaster University	January 2010 - February 2011	£77,352
Towards an integrated model of common ground, language and gesture	The University of Manchester	April 2010 - March 2011	£79,006
Comparing the cognitive processes underlying autobiographical memory retrieval and future event simulation	Leeds Metropolitan University	January 2010 - December 2010	£74,932
Understanding the psychology of the interplay between simplicity and complexity in popular song	University of Plymouth	January 2010 - January 2011	£78,805
Uncertainty in Aspirations	Institute of Education	November 2009 - March 2011	£80,017
Acquisition of a rich annotated corpus of binocular eye-movements from dyslexic readers	University of Edinburgh	December 2009 - November 2010	£80,580
A visual exposure strategy to facilitate the introduction of fruit and vegetables into the diets of toddlers	University of Reading	May 2010 - April 2011	£79,779
Can Competition Increase Information Sharing in Groups?	Imperial College London	April 2010 - October 2011	£78,219
Parents' linguistic, acoustic, and non-verbal cues for toddler-directed pretense and humour	University of Stirling	May 2010 - February 2011	£79,867
The association between phonological and morphological development in children at risk of language and literacy difficulties: A longitudinal follow up	University of Warwick	June 2010 - May 2011	£76,888
<i>Research grant (standard)</i>			
ECRP05: Family and genetic influences on children's psychological development	Cardiff University	July 2007 - September 2010	£174,456
The individual in the group: Social identity and the dynamics of change	University of Exeter	January 2007 - December 2010	£1,060,744
Cognitive Effects of Bilingualism Across the Lifespan	Bangor University	November 2006 - August 2011	£602,860
Mechanisms of learning, alignment and routinization in dialogue	University of Edinburgh	February 2007 - October 2010	£342,332

Type of award/Title	Institution	Date	Amount
<i>Research grant (standard) (contd)</i>			
The Development of Object Recognition into Adolescence	Goldsmiths College	March 2007 - October 2010	£432,205
Positional access and grouping in short-term memory	University of Bristol	February 2007 - April 2010	£249,003
A comprehensive profile of awareness in early-stage dementia	Bangor University	May 2007 - October 2010	£529,286
ECRP06: Collaboration led by Dr Chris N.L. Olivers	University of Birmingham	March 2008 - February 2012	£157,869
Parental Anxiety: Cognitive-Behavioural Processes in the Intergenerational Transmission of Fear to Children	University of Sussex	October 2007 - October 2010	£285,064
The Development of Children's False Memories	Lancaster University	June 2007 - May 2010	£316,016
Conceptual Change as the Combination of Domain-Specific and Domain-General Mechanisms	University of Bristol	October 2007 - September 2010	£340,342
Good Enough Language Comprehension: Effects of Reanalysis Difficulty on Comprehension and Production of Subsequent Mater	University of Edinburgh	June 2007 - December 2010	£337,226
Role of parent-child narrative co-construction in the development of child shy and socially anxious behaviour, and adjustment to school.	University of Reading	October 2007 - September 2010	£229,599
Testing the efficacy and mechanisms of collaborative implementation intentions	University of Leeds	November 2007 - May 2010	£164,627
Individual differences in word naming: Models and data	University of Warwick	August 2007 - July 2010	£405,705
Sensory storage of spatio-temporal objects: sequences, signs and facial expressions	Durham University	October 2007 - August 2011	£250,965
The development and importance of proficiency in basic calculation	Institute of Education	December 2007 - August 2010	£437,247
Domain specific systems in infant processing of emotion expressions	University of Reading	January 2008 - June 2011	£276,282
Comparing two new single-process accounts of the restriction of argument-structure generalizations	University of Liverpool	July 2008 - June 2010	£216,299
"Mirror systems" and the perception and generation of action: Multivariate fMRI studies	Bangor University	June 2008 - May 2011	£383,275
Judgments of vehicle approach, in a road crossing situation, amongst primary school children.	Royal Holloway, Univ of London	May 2008 - April 2011	£274,800
Bilateral (Germany): The neural substrates of social comparison	Bangor University	May 2008 - December 2011	£396,070
Learning to combine sense and experience for optimal perceptual judgements	Birkbeck College	February 2008 - June 2011	£317,012
A Decision-By-Sampling Account of Decision Under Risk	University of Warwick	April 2008 - March 2011	£248,899
Constraining generalisation in language learning: a rational learning approach	University of Oxford	May 2008 - April 2011	£255,347
What determines where we look?	University of Edinburgh	April 2008 - March 2011	£343,767
Public perceptions of climate change and energy futures in Britain	Cardiff University	October 2008 - December 2010	£314,177

Type of award/Title	Institution	Date	Amount
<i>Research grant (standard) (contd)</i>			
Bilateral Ireland: "Embodying the Imagined Community: The role of collective participation in the transformation of Irish identities."	Queen's University of Belfast	December 2008 - June 2011	£160,514
EUROCORES LogiCCC: collaboration led by Kleiter. Thinking about counterfactual possibilities in middle-childhood	University of Birmingham	October 2008 - September 2010	£177,083
Modeling Working Memory	University of Bristol	September 2008 - August 2011	£669,774
Motivated identity construction in cultural context	University of Sussex	August 2008 - February 2011	£257,652
'Mirror Touch' and the Neural Basis of Empathy (Response to: Society, Social Behaviour and the Neurosciences)	University of Sussex	October 2008 - September 2011	£288,279
The Impact of Living Abroad: Stress, Adaptation, and Intergroup Contact	University of Essex	September 2008 - March 2012	£287,859
Whose memory is it anyway? Joint action effects on working memory and attention	University of Birmingham	October 2008 - September 2011	£279,393
Collective participation and social identification: A study of the individual, interpersonal and collective dimensions of attendance at the Magh Mela.	University of Dundee	November 2009 - May 2012	£448,633
Modelling the cross-linguistic pattern of verb-marking and utterance-internal omission errors in MOSAIC using syllabified input	University of Liverpool	August 2008 - July 2011	£321,757
Spatial cognition and learning: Understanding obstacles and opportunities in the integration of information from multiple images	Nottingham Trent University	October 2008 - October 2011	£192,332
An experimental approach to studying cultural variation and convergence	University of Stirling	March 2009 - March 2011	£315,445
Adaptive Tests of Cognitive Models	University College London	June 2009 - May 2011	£181,972
Lifestyle Change: Values and Volition	Swansea University	September 2009 - February 2013	£347,478
The emergence and development of structural systematicity in language: an experimental study	University of Edinburgh	February 2009 - August 2011	£308,475
Physiological and Cognitive Mediators of Gene x Environment Interaction Effects on Children's Antisocial Behaviour	King's College London	February 2009 - January 2014	£728,266
The Prejudice Reducing Properties of Social Category Combinations	University of Leeds	March 2009 - March 2011	£162,164
ECRP 08: collaboration led by Henrik Walter. Regulatory functions of social emotions in cooperation	Cardiff University	February 2010 - January 2013	£234,197
A local bias in attention.	Goldsmiths College	September 2009 - August 2012	£400,374
The phenomenon and mechanisms of innate intersubjectivity: Newborns' sensitivity to communication disturbance	University of Dundee	March 2009 - November 2010	£85,099
Time and interventions in children's causal structure learning	Queen's University of Belfast	October 2009 - May 2012	£178,638
The contribution of automatic and controlled processes to cue-competition in human learning.	University College London	April 2009 - March 2011	£169,587

Type of award/Title	Institution	Date	Amount
<i>Research grant (standard) (contd)</i>			
Parenting and the psychological development of children raised in gay father families	University of Cambridge	October 2009 - September 2012	£346,498
Eye tracking as a measure of young infants' knowledge of objects	Lancaster University	April 2009 - September 2012	£510,102
Auditory distraction during semantic processing: A process-oriented view	Cardiff University	June 2009 - May 2012	£321,604
Conscious Perception in Implicit Learning and the Emergence of Conscious Knowledge	University of Sussex	June 2009 - May 2012	£278,177
Individual differences in the production of speech-accompanying gestures	University of Birmingham	June 2009 - May 2011	£185,944
The Role of Sensory-Motor and Affective Information in Meaning Representation	University College London	January 2010 - December 2012	£602,583
The social guilt hypothesis	University of Kent	September 2009 - September 2011	£165,962
Get- versus be-passives in English: a functional investigation	University of Glasgow	November 2009 - October 2012	£280,143
An investigation of fixational eye movement patterns during three-dimensional object recognition:	Bangor University	April 2010 - March 2013	£542,462
The architecture of human face processing in typical and atypical populations: Combining behavioural and electrophysiological measures	Birkbeck College	January 2010 - December 2012	£352,596
Characterising affective vulnerabilities in children with different subtypes of antisocial behaviour	University College London	December 2009 - November 2012	£400,793
Construal, Processing Style, and Memory for Social Events	University of Plymouth	January 2010 - December 2012	£246,329
Fluent reading and the brain: Co-registration and statistical decomposition of eye fixations and anatomically-based electrophysiology	University of Glasgow	February 2010 - February 2012	£226,624
Bilingualism as a protective factor in age-related neurodegenerative disorders	Bangor University	January 2010 - January 2013	£501,109
Reasoning and cue competition effects in causal learning: A developmental study	Queen's University of Belfast	January 2010 - December 2011	£170,555
Using a word-learning paradigm to investigate three forms of generalisation in the acquisition of lexical knowledge	Royal Holloway, Univ of London	April 2010 - April 2013	£298,966
ECRP09: collaboration led by Patrick Haggard: Intentional Inhibition of Human Action	University College London	April 2010 - September 2014	£401,613
Investigating prospection, imagination, and navigation in individuals with autism spectrum disorder	City University	April 2010 - August 2010	£281,154
Mechanisms of catastrophic worrying	University of Sussex	May 2010 - May 2013	£321,565
Understanding and using self-generated validity to promote behaviour change	University of Leeds	June 2010 - December 2012	£292,918
Cognitive load in face-to-face interactions: Evidence from neurodevelopmental disorders	Northumbria University	February 2010 - July 2011	£158,597
<i>Research Related Activity</i>			
Working Late: Strategies to Enhance Productive and Healthy Environments for the Older Workforce	Loughborough University	November 2008 - September 2012	£1,309,745

Type of award/Title	Institution	Date	Amount
<i>Research Related Activity (contd)</i>			
ESRC RDI in Applied Psychometrics II: Advancing Quantitative Methods in Psychological Assessment using freeware (R), Mplus and Stata	University of Cambridge	July 2010 - June 2012	£80,422
<i>Seminar Competitions</i>			
An Interdisciplinary Network on Motivational Interventions for Behaviour Change and Treatment Engagement.	University Of Wales Institute Cardiff	November 2009 - April 2011	£14,809
Counselling and Psychotherapy Clinical Supervision Research	University of Leicester	November 2009 - April 2011	£18,304
Darwin's Medicine: Evolutionary psychology and its applications	University of Oxford	August 2009 - December 2010	£6,602
<i>Substantive Research Contract</i>			
Promoting independence and social engagement among older people in disadvantaged communities	Keele University	January 2008 - March 2011	£334,281

## APPENDIX 2

### Full details of current BBSRC-funded projects in psychologically-related areas

Type of award/Title	Institution	Date	Amount
<i>David Phillips Fellowship</i>			
Combining cues, priors and constraints for depth perception	University of Birmingham	October 2005 - January 2011	£310,671
Contextual vocal learning and decision-making in social birds	University of Bristol	October 2006 - January 2011	£276,493
Investigating the neural basis of selective attention in the human brain: A combined neurodisruption and neuroimaging study	Cardiff University	February 2008 - December 2010	£209,448
Biasing influences on the motor system during action preparation: a multimodal neuroimaging-computationally informed approach	University College London	October 2008 - January 2011	£750,612
The ecological, cultural and cognitive context of tool use in New Caledonian crows	University of Oxford	September 2009 - January 2011	£1,148,366
<i>Research Development Fellowship</i>			
Infant word learning investigated through the habituation technique	University of Birmingham	September 2009 - January 2011	£77,210
<i>Animal Welfare Programme</i>			
Perinatal programming of stress response and nociceptive mechanisms and the welfare consequences	University of Edinburgh	January 2006 - January 2011	£1,113,567
	University of Glasgow	January 2006 - January 2011	£419,966
	Scottish Agricultural College	January 2006 - January 2011	£1,025,169
<i>Diet and Health Research Industry Club (DRINC)</i>			
Drivers of eating behaviour during chronic overconsumption: Role of food hedonics (liking and wanting) and peptide biomarkers on satiation and satiety.	University of Leeds	November 2008 - January 2011	£540,556
Understanding decisions about portion size: The key to acceptable foods that reduce energy intake?	University of Bristol	March 2009 - January 2011	£379,247
Defining the gut-to-brain signalling mechanisms underlying responses to nutrients	The University of Manchester	March 2009 - January 2011	£573,579
Maximising satiety through manipulating expectations, sensory quality and nutrient content.	University of Sussex	January 2010 - January 2011	£539,705
<i>Responsive mode</i>			
Short-latency auditory and somatosensory input to dopaminergic neurons	University of Sheffield	September 2006 - January 2011	£304,451
Mechanisms of tactile spatial orienting and selection	City University	October 2006 - January 2011	£311,440
Perirhinal neuronal activity and recognition memory mechanisms	University of Bristol	January 2007 - January 2011	£396,364
Selection for Action: Interference Effects on the Articulation of Speech Sounds	Royal Holloway, Univ of London	January 2007 - January 2011	£289,571
Cognition and Action In The Cortico-Cerebellar System	Royal Holloway, Univ of London	March 2007 - January 2011	£302,865
Classification decisions in machines and human brains	University of Birmingham	April 2007 - January 2011	£936,093
Beating auditory beats: plasticity and selectivity in the multimodal integration of cues to the temporal control of action	University of Birmingham	April 2007 - January 2011	£411,761

Type of award/Title	Institution	Date	Amount
<i>Responsive mode (contd)</i>			
Similarity, learning and memory: A comparative analysis	Cardiff University	August 2007 - January 2011	£360,143
Predicting the Learning, Diffusion and Inheritance of Behavioural Innovations in Animal Populations.	University of St Andrews	October 2007 - January 2011	£278,751
Contextual Influences on Orientation Perception	University College London	October 2007 - January 2011	£402,264
Exploiting <i>C. elegans</i> to provide insight into neural substrates of human alcohol dependence	University of Southampton	October 2007 - January 2011	£535,578
Top-down modulation of attentional capture in vision: Electrophysiological investigations	Birkbeck College	January 2008 - January 2011	£310,299
LTP: A mechanism for object-place learning in the prefrontal cortex?	University of Bristol	January 2008 - January 2011	£387,129
Role of MSK in chromatin remodelling underlying stress- induced transcriptional induction in dentate gyrus granule neurons and behavioural adaptation	University of Bristol	April 2008 - January 2011	£339,017
Studying the Neural Substrates of Incidental Self- Referencing.	University of Aberdeen	April 2008 - January 2011	£162,675
Enhancement of learning and memory by flavonoids	University of Reading	April 2008 - January 2011	£388,286
Attentional demands of state transitions in posture and balance	University of Birmingham	April 2008 - February 2011	£379,960
Stereotypy and perseveration in captive European starlings: consequences for decision-making	Newcastle University	April 2008 - February 2011	£366,905
Multisensory dynamics of selective attention in the human brain: a combined neurodisruption and neuroimaging project	Cardiff University	April 2008 - January 2011	£403,885
Perceptual Learning: Effects and Mechanisms	University of York	May 2008 - January 2011	£225,800
From Local to Global Motion Perception	University College London	June 2008 - February 2011	£304,057
Investigation of the role and cortico-cortical interactions of the right occipital face area	University College London	June 2008 - February 2011	£331,696
The consolidation of temporal information processing during sleep: behavioural and neural correlates	The University of Manchester	June 2008 - January 2011	£329,141
Does pre-operative affective state influence the severity and duration of post-op pain in rats?	Newcastle University	July 2008 - February 2011	£307,177
Test of an integrated associative theory of timing	University of Nottingham	July 2008 - February 2011	£412,961
Neural plasticity of the motor system: Functional specialization vs. integration	University of Nottingham	July 2008 - February 2011	£295,368
The Role of Attention in Animal Learning	University of Nottingham	September 2008 - February 2011	£366,352
Opioid self-administration in the assessment of post- operative pain in rats	Newcastle University	September 2008 - February 2011	£345,656
A genome-wide association study of non-pathological cognitive ageing	University of Edinburgh	September 2008 - February 2011	£698,047
A genome-wide association study of non-pathological cognitive ageing	The University of Manchester	September 2008 - February 2011	£449,722
Interaction between components of spatial learning: behavioural and neural basis	Durham University	October 2008 - February 2011	£347,317

Type of award/Title	Institution	Date	Amount
<i>Responsive mode (contd)</i>			
Development of goal-directed action in young children	University of Cambridge	October 2008 - February 2011	£258,124
Anatomy and neuropharmacology of top-down control	Newcastle University	November 2008 - February 2011	£1,041,122
Functional role of second-order processing in binocular vision	University of Stirling	January 2009 - February 2011	£275,052
Interactions of the parietal cortex during cognition and sleep	University of Bristol	January 2009 - February 2011	£363,430
Animal Decision-Making: Sequential Versus Simultaneous Choice	University of Oxford	January 2009 - February 2011	£481,994
The effects of acute stress on glutamate receptor trafficking and synaptic plasticity in the hippocampus	University of Bristol	January 2009 - February 2011	£564,431
Brain processes predicting future perception: cortical feedback and visual predictions	University of Glasgow	February 2009 - February 2011	£331,331
The role of PDZ scaffold CASK and CaMKII signaling in synaptic plasticity and learning	University of Bristol	June 2009 - February 2011	£436,448
To call or not to call: mechanisms underlying vocal production in chimpanzees	University of York	July 2009 - February 2011	£293,943
Segmentation in 4D visual search	University of Birmingham	July 2009 - February 2011	£527,623
Multimodal imaging investigation of the brain regions supporting different stages of human memory	University of Cambridge	August 2009 - February 2011	£325,731
Plasticity-related mechanisms involved in memory and pattern separation in the medial temporal lobe	University of Cambridge	September 2009 - February 2011	£318,971
The neurobiology of human working memory for threat: A multi-method approach	Bangor University	October 2009 - February 2011	£318,404
The role of TASK potassium channels in theta oscillations and behaviour	Imperial College London	October 2009 - February 2011	£503,351
A multi-scale model of binocular fusion in the human visual system	Aston University	October 2009 - March 2011	£354,219
Top-down and bottom-up selective mechanisms in attention: subcortical convergence in visual thalamus?	University College London	January 2010 - February 2011	£1,354,817
The role of epigenetic processes in mediating the molecular and behavioural responses to stress in the dentate gyrus	University of Bristol	January 2010 - February 2011	£703,431
Attention and predictive learning	Cardiff University	January 2010 - March 2011	£459,737
An electrophysiological investigation of emotion-enhanced recollection	University of Leeds	February 2010 - March 2011	£308,287

### APPENDIX 3

Full details of current MRC-funded projects in psychology (projects where full information available only)

Type of award/Title	Institution	Date	Amount
<i>Bioinformatics Training Fellowship</i>			
How does the brain combine historical knowledge and online processing in decision making?	University of Oxford	September 2009 - September 2012	£347,130
<i>Career Development Award</i>			
Graphical Models With Latent Variables and Their Application in Cognitive Approaches to Neuropsychological Disorders	Lancaster University	September 2008 - September 2012	£283,025
Primate medial thalamus: Investigating its functions and interrelated neural systems for memory	University of Oxford	January 2009 - December 2013	£2,225,913
<i>Centre Grant</i>			
MRC Social, Genetic and Developmental Psychiatry Centre renewal	Institute of Psychiatry	October 2005 - September 2010	£1,272,708
University College London CRUCIBLE, supported by BBSRC, EPSRC, ESRC and MRC	University College London UCL	August 2008 - July 2013	£2,950,929
<i>Clinical Training Fellowship</i>			
Learning and decision making in Parkinson's Disease	University College London UCL	January 2008 - December 2010	£171,040
The Treatment of Child Anxiety Disorders via Guided CBT Self-Help: A Randomised Controlled Trial	University of Reading	April 2009 - March 2013	£278,696
Investigation of the reorganisation of language and verbal memory systems in chronic temporal lobe epilepsy.	Imperial College London	Until July 2013	£154,545
Functional anatomy of cognitive training using chunking in working memory in Alzheimers disease	Institute of Psychiatry	Until July 2014	£248,225
<i>Clinical Scientist Fellowship</i>			
Improving interventions for anxious youth: developing understanding and treatment of parents' cognitions and behaviours	University of Reading	December 2007 - November 2012	£796,700
A structural and functional imaging study of autism and its extended phenotype	University of Cambridge	December 2008 - November 2012	£874,371
Motivational processing, Mesolimbic and Mesostriatal Function in Neuropsychiatric Disease	University of Cambridge	January 2009 - December 2012	£738,764
Disconnection after traumatic brain injury: impairments of cognitive control and their impact on learning.	Imperial College London	February 2009 - January 2013	£1,051,385
<i>Co-operative Group Grant</i>			
ALSPAC: A reference population for genetic & environmental epidemiology	University of Bristol	January 2006 - December 2010	£4,470,922
<i>ESRC/MRC Interdisciplinary Postdoctoral Fellowship</i>			
Adolescent alcohol and substance misuse beliefs and behaviours: The role of language, inhibition, and attentional proces	Institute of Psychiatry	September 2008 - August 2010	£164,053

Type of award/Title	Institution	Date	Amount
<i>ESRC/MRC Interdisciplinary Postdoctoral Fellowship (contd)</i>			
The role of learning in the development of imitation systems, both in normal development and autism spectrum disorders.	Institute of Neurology	October 2008 - September 2010	£175,851
Contribution of genetics and early cognitive and emotional development to behaviour problems in middle childhood	Institute of Psychiatry	November 2008 - October 2010	£201,973
How does the brain learn to read? Investigations combining neuroimaging with artificial orthography learning.	Medical Research Council HQ	Until September 2011	£121,622
<i>ESRC/MRC/NIHR Health Economics</i>			
Modelling Health within the Household: Integrating Theory and Data	University of Oxford	September 2009 - August 2011	£164,674
<i>FLARE Fellowships</i>			
Age-related changes in the use of linguistic cues for speech intelligibility in adverse listening conditions.	University of Cambridge	January 2008 - December 2010	£215,840
<i>New Investigator Research Grants</i>			
Can we integrate cognitive-behavioural and pharmacological theories of anxiety?	University of Oxford	October 2006 - September 2010	£324,618
Human drug dependence: Cognitive predisposition and neural mechanisms	University of Nottingham	October 2008 - October 2011	£359,910
Neural systems and neurobiological pathways underlying aversive memories	University of Birmingham	March 2009 - March 2012	£379,466
Neural mechanisms for visual processing of human agency	University of Aberdeen	March 2009 - March 2012	£314,937
Neurocognitive predictors of adolescent depression: a high risk longitudinal study	University College London UCL	October 2009 - September 2012	£326,511
Enhancing attention through working memory: functional neuroimaging and translational applications	Imperial College London	January 2010 - December 2012	£384,130
<i>Population Health Scientist</i>			
When a close friend or relative commits suicide: the impact on mental health and social functioning of young adults	University College London UCL	September 2009 - August 2012	£201,500
Violence against adults with severe mental illness compared with the UK general population	University College London UCL	September 2009 - August 2013	£357,997
Exploring the utility of the metacognitive model in predicting and preventing emotional distress after cancer.	University of Liverpool	September 2009 - September 2014	£278,663
<i>Research Grants</i>			
Origins of learning difficulties and behaviour problems: from behavioural genetics to behavioural genomics	Institute of Psychiatry	October 2005 - September 2010	£1,352,568
Pathfound: Revealing the neural basis of semantic memory and its breakdown in semantic dementia and stroke aphasia	The University of Manchester	November 2006 - October 2011	£785,789
Studies of human psycho-physiological responses to visceral pain.	Queen Mary, University of London	September 2007 - September 2010	£400,096
Frontal cortical interactions during decision-making and social valuation	University of Oxford	October 2007 - September 2010	£580,042
Inhibitory control and cue salience in alcohol abuse	University of Liverpool	October 2007 - September 2010	£283,087
Mechanisms of top-down visual selection	University of Birmingham	October 2007 - September 2010	£526,167

Type of award/Title	Institution	Date	Amount
<i>Research Grants (contd)</i>			
The neural basis of treatment-induced remission in depression: an fMRI and pharmacMRI study	The University of Manchester	November 2007 - November 2010	£712,908
A translational study of game-theoretic models of social exchanges: serotonin and vulnerability to depression	University of Oxford	January 2008 - December 2011	£588,099
Neuronal mechanisms and neuropharmacology of perceptual learning	Newcastle University	July 2008 - June 2012	£1,059,392
Neurobiological correlates of trait impulsivity and drug abuse vulnerability	University of Cambridge	September 2008 - September 2011	£985,472
Neurocognitive Endophenotypes of Stimulant Drug Dependence	University of Cambridge	October 2008 - September 2011	£651,354
Neural underpinnings of emotional responding and regulation: antecedents and correlates	University of Reading	December 2008 - November 2010	£380,841
The development and interfacing of neuropsychological testing in mice and humans to advance gene investigations into WBS	The University of Manchester	April 2009 - April 2012	£734,810
Parietal cortical structure and function in attentional disorders	University of Oxford	September 2009 - August 2013	£502,702
Multimodal imaging of parietal brain networks in adults and children with developmental dyscalculia	University of Cambridge	October 2009 - September 2012	£832,218
Social, emotional & biological processes in emergent conduct disorders: Wirral Child Health & Development Study 1-4 yrs	The University of Manchester	January 2010 - February 2014	£1,871,526
Neurobiology of resilience to depression	The University of Manchester	March 2010 - February 2013	£536,871
MRI measures of brain structure and function as predictors of medium-term response to psychotherapy in adolescent MDD	University of Cambridge	April 2010 - March 2014	£591,446
<i>Research Programme Grants</i>			
Neural and psychological basis of compulsive drug seeking and relapse prevention in drug addiction.	University of Cambridge	October 2006 - September 2011	£2,008,020
The Typical and Atypical Development of the Social Brain During Infancy	Birkbeck College	October 2008 - September 2013	£1,694,860
<i>Senior Non-clinical Fellowship</i>			
Cell and systems analysis of spatial and episodic memory	Institute of Neurology	October 2006 - September 2011	£1,433,935
<i>Special Training Fellowship in HSR</i>			
Improving Mental Health in Adolescence: Risk Factors and Interventions within the School Context	University of Bristol	October 2006 - September 2011	£253,643
Therapist Effects in the Design, Analysis and Reporting of Psychotherapy Randomised Clinical Trials	Institute of Psychiatry	September 2006 - August 2010	£190,285
Understanding the effects of school social networks on young people's health	London Sch of Hygiene and Tropical Medic	October 2008 - September 2011	£256,267
<i>Strategic Grant</i>			
A cognitive vaccine for depression: assessment using neurobiological outcomes in experimental medicine models	University of Oxford	August 2008 - July 2011	£199,862
Conversion Disorder: A Cognitive Neuropsychiatric Approach	Institute of Psychiatry	August 2008 - August 2011	£247,802

Type of award/Title	Institution	Date	Amount
<i>Strategic Grant (contd)</i>			
Impaired neural responses to the sight and taste of chocolate: A model of anhedonia in depression.	University of Oxford	October 2008 - September 2011	£382,091
What health care experiences matter to patients and how can we assign value to them for policy making purposes?	University of Aberdeen	March 2009 - February 2011	£237,671
Neurobiology of cognition and craving in opiate addiction: implications for relapse	The University of Manchester	September 2009 - August 2011	£257,481
Predicting Relapse in Treatment-Seeking Pathological Gamblers using Impulsivity and Compulsivity Assays	University of Cambridge	September 2009 - September 2011	£214,402
Understanding alcohol's effects on inhibition of behaviour; implications for treatment	University of Sussex	November 2009 - October 2011	£201,406
Genetic influences underlying impulsivity and risk for drug addiction	University of Cambridge	December 2009 - December 2011	£228,100
<i>Trial Grant</i>			
A multicentre, randomised controlled trial of cognitive therapy to reduce harmful compliance with command hallucinations	University of Birmingham	September 2007 - May 2011	£821,416
Treatment of Child Anxiety Disorder in the Context of Maternal Anxiety: A Randomised Controlled Trial	University of Reading	September 2007 - June 2012	£1,709,009
Multi-centre Randomised Controlled Trial of Collaborative Care for Depression	University of Exeter	September 2008 - August 2012	£1,830,333
Outcome at School Age Following Treatment With Whole Body Hypothermia After Perinatal Asphyxial Encephalopathy	Imperial College London	Until August 2013	£965,954

## APPENDIX 4

### Full details of current EPSRC-funded projects in psychology-related projects

Type of award/Title	Institution	Date	Amount
<i>Discipline Hopping Awards</i>			
Privacy management and information flow in the context of the development of the Extended Choice Network: A socio-technical study	St George's University of London	May 2009 - January 2011	£68,126
<i>First Grant Scheme</i>			
Towards a human-inspired control architecture for visually-guided action	University of Birmingham	March 2006 - April 2009	£126,580
Neural coding of visual inputs in the human medial temporal lobe	University of Leicester	June 2006 - September 2009	£125,567
Supporting creativity in computer game authoring	Glasgow Caledonian University	June 2006 - August 2006	£209,840
Designing tangibles for learning: An empirical investigation	Institute of Education	January 2008 - March 2010	£354,407
Computational Modelling of Neural Network Growth and Dynamics	Newcastle University	April 2009 - March 2012	£379,567
<i>Follow-on Fund</i>			
Grid Applications Performance Prediction Tool	University of Leeds	October 2008 - September 2009	£90,332
<i>Network</i>			
Bridging the Global Digital Divide Network	Sheffield Hallam University	September 2006 - August 2009	£2,406
	Swansea University	September 2006 - August 2009	£79,359
<i>Overseas Travel Grants</i>			
Scaling up neuroscience - Analysis of multi-electrode array data	University of Warwick	November 2004 - October 2007	£15,900
A Typology Driven Interface Study for E-Books	University of Strathclyde	May 2005 - August 2005	£12,714
Prediction and Integration in Human Parsing	University of Edinburgh	April 2007 - July 2007	£9,744
Ambient information representation: managing increasing data (overseas travel grant)	University of Birmingham	February 2008 - April 2008	£16,875
Brain-inspired architectures for next-generation microelectronic systems	The University of Manchester	January 2009 - February 2010	£33,459
Research Visit to Nihon University in Japan: Motorcycle Dynamics and Rider Modelling	University of Nottingham	June 2009 - September 2009	£20,366
<i>Platform Grants</i>			
Affecting People with Natural Language	University of Aberdeen	March 2007 - February 2012	£643,904
Trustworthy Ambient Systems (TRAMS)	Newcastle University	July 2007 - June 2011	£833,300
The Challenge of Widespread Ubiquitous Computing	University of Nottingham	September 2008 - August 2013	£1,000,263
Advanced Processor Technologies Platform Grant	The University of Manchester	October 2008 - September 2013	£1,140,939
<i>Programme Grants</i>			
CHI+MED: Multidisciplinary Computer-Human Interaction research for the design and safe use of interactive medical devices	University College London	October 2009 - September 2015	£5,766,874

Type of award/Title	Institution	Date	Amount
<i>Standard Research Grants</i>			
Drama and Performance for Pleasurable Personal Learning Environments (DAPPPLE)	University of Glasgow	January 2005 - June 2007	£38,565
A Novel Computing Architecture for Cognitive Systems based on the Laminar Microcircuitry of the Neocortex	University of Plymouth	June 2005 - November 2010	£1,857,934
Unifying approaches to design of experiments	Queen Mary, University of London	September 2005 - January 2010	£473,103
Cognitive Systems Foresight: Cue-competition effects during spatial learning in computer-generated environments	University of Hull	September 2005 - September 2008	£136,182
The Unintended and Indirect Effects of Performance Measurement and Regulation on UK Productivity: A Multidisciplinary Overview - Closing the Gap	University of Essex	October 2005 - December 2006	£51,220
NEMO: Networked Embedded Models and Memories of Physical Work Activity	Lancaster University	October 2005 - September 2009	£1,057,611
Empathic avatars: input, processing and output of emotional state	University of Cambridge	October 2005 - September 2009	£295,110
Empathic avatars: input, processing and output of emotional state	University College London	November 2005 - October 2009	£264,965
Watching Walkers	Edinburgh Napier University	November 2005 - November 2006	£18,101
Workwork on spatial language and dialogue	Northumbria University	November 2005 - May 2006	£4,761
Modelling Motivation in Software Engineering: A Feasibility Study	University of Hertfordshire	January 2006 - December 2006	£52,177
High Dynamic Range for High Fidelity Image Synthesis of Real Scenes	University of Bristol	January 2006 - February 2007	£228,923
Developing a simulator-based hazard perception training package	University of Nottingham	January 2006 - March 2009	£457,301
High Dynamic Range for High Fidelity Image Synthesis of Real Scenes	University of Bradford	January 2006 - February 2009	£324,149
Taught Course for Researchers, on Complexity Science and Complex Social Systems.	London School of Economics & Pol Sci	January 2006 - January 2008	£74,407
AABAC: Adaptive Asynchronous Brain-Actuated Control	University of Oxford	February 2006 - July 2009	£180,462
Understanding Biological Motion using Moving Light Displays	University of Bristol	February 2006 - July 2009	£354,778
Unified Modelling of Complex Systems - to facilitate ongoing organisation design and change	Loughborough University	March 2006 - August 2008	£321,033
Exploratory Workshop on Cognitive Robotics and Control	University of Reading	March 2006 - September 2006	£14,117
Workshop on Psychology of Face and Gesture Recognition	University of Glasgow	March 2006 - June 2006	£4,582
eSTORM3 : e-Science Technical Operations Meetings 3	University of Edinburgh	April 2006 - March 2008	£507,745
Modelling Melodic Memory and the Perception of Musical Similarity	Goldsmiths College	April 2006 - March 2009	£274,773
AABAC: Adaptive Asynchronous Brain-Actuated Control	University of Essex	April 2006 - September 2009	£261,939
Basic Image Features	University College London	May 2006 - September 2009	£289,637
Perceptual Measurement of Surface Texture	Heriot-Watt University	May 2006 - October 2009	£261,568

Type of award/Title	Institution	Date	Amount
<i>Standard Research Grants (contd)</i>			
StoryBank: Sharing stories across digital divides	University of Surrey	June 2006 - April 2008	£79,818
LOFT06: Logic and the Foundations of Game and Decision Theory	University of Liverpool	July 2006 - September 2006	£5,289
Defending the Weakest Link: Intrusion via Social Engineering	University of York	August 2006 - January 2010	£189,277
The e-Science Institute: 2006 To 2011	University of Edinburgh	August 2006 - July 2011	£2,714,338
Workshop on Biologically Inspired Information Fusion	University of Surrey	August 2006 - October 2006	£13,341
Adaptive Visualisation Tools for e-Science Collaboration	The University of Manchester	August 2006 - December 2009	£258,467
StoryBank: Sharing stories across digital divides	Nottingham Trent University	September 2006 - February 2008	£151,951
Cognitive Systems Foresight: Human and computer face recognition from video sequences	The University of Manchester	September 2006 - August 2009	£226,745
Science Team: The public view of uncertainty	Kingston University	September 2006 - September 2008	£121,786
StoryBank: Sharing stories across digital divides	Loughborough University	September 2006 - June 2008	£7,039
Eye Catching: Supporting tele-communicational eye-gaze in Collaborative Virtual Environments	University College London	October 2006 - December 2008	£207,326
Eye Catching: Supporting tele-communicational eye-gaze in Collaborative Virtual Environments	Roehampton University	October 2006 - December 2008	£236,869
Eye Catching: Supporting tele-communicational eye-gaze in Collaborative Virtual Environments	University of Salford	October 2006 - March 2009	£232,507
Simplicity, Complexity and Modelling	University of Glasgow	October 2006 - March 2009	£253,580
Pervasive Computing Support for Market Trading	University College London	October 2006 - September 2009	£446,934
VESEL: Village e-science for Life	Institute of Education	October 2006 - December 2009	£474,928
Colour to grey scale and related transforms	University of Bradford	October 2006 - January 2010	£34,768
Neural mechanisms of collision detection and steering	Royal Holloway, Univ of London	October 2006 - March 2010	£260,224
Embedding e-Science Applications - Designing and Managing for Usability	University of Oxford	October 2006 - March 2010	£270,896
Pervasive Computing Support for Market Trading	University of Sussex	October 2006 - March 2010	£264,485
Perceptual Docking for Robotic Control (Equipment Rich Proposal)	Imperial College London	October 2006 - September 2010	£878,018
CARMEN: Code analysis, repository, and modelling for e-Neuroscience	Newcastle University	October 2006 - September 2010	£4,013,763
Exploring Mechanisms of Cognitive and Behavioural Development in Humans and Machines	King's College London	October 2006 - March 2011	£321,489
StoryBank: Sharing stories across digital divides	Swansea University	October 2006 - July 2008	£2,819
Dynamical information processing in a neuronal microcircuit	University of Stirling	October 2006 - October 2009	£246,698
An Investigation of Regulatory Decision Making by Automated Decision Makers	University of Nottingham	October 2006 - October 2009	£222,411

Type of award/Title	Institution	Date	Amount
<i>Standard Research Grants (contd)</i>			
Colour to grey scale and related transforms	University of East Anglia	October 2006 - April 2010	£327,017
Developing theory for evolving socio-cognitive systems	Sheffield Hallam University	October 2006 - October 2010	£337,474
MOTION CAPTURE DATA SERVICES FOR MULTIPLE USER CATEGORIES	Newcastle University	November 2006 - April 2007	£40,506
Developing theory for evolving socio-cognitive systems	University of Liverpool	November 2006 - September 2007	£193,550
Eye Catching: Supporting tele-communicational eye-gaze in Collaborative Virtual Environments	University of Reading	November 2006 - October 2008	£84,254
Cognitive Systems Foresight: Human and computer face recognition from video sequences	Manchester Metropolitan University	December 2006 - March 2010	£185,914
Physics-based virtual environment for training in vascular interventional radiological procedures	Bangor University	December 2006 - May 2010	£386,627
Developing theory for evolving socio-cognitive systems	The University of Manchester	December 2006 - November 2010	£82,877
Cognitive Systems Foresight: Human Attention and Machine Learning	University of Bristol	December 2006 - September 2010	£334,072
Otoacoustic Emission Based Biometric Systems	University of Southampton	January 2007 - June 2010	£356,648
Pervasive Computing Support for Market Trading	King's College London	January 2007 - June 2010	£349,842
Physics-based virtual environment for training in vascular interventional radiological procedures	University of Liverpool	January 2007 - November 2010	£273,340
StoryBank: Sharing stories across digital divides	Queen Mary, University of London	January 2007 - July 2008	£89,833
Cognitive Systems Foresight: Human Attention and Machine Learning	University of Leeds	February 2007 - January 2010	£382,907
An Edinburgh Speech Production Facility	University of Edinburgh	April 2007 - August 2010	£619,576
Physics-based virtual environment for training in vascular interventional radiological procedures	University of Leeds	April 2007 - October 2010	£571,217
D-SCENT: Raising challenges to deception attempts using data scent trails	University of St Andrews	May 2007 - April 2009	£163,629
Physics-based virtual environment for training in vascular interventional radiological procedures	Imperial College London	May 2007 - April 2010	£285,793
D-SCENT: Raising challenges to deception attempts using data scent trails	Leeds Metropolitan University	May 2007 - October 2010	£142,308
System risks in information-rich environments: monitoring for safe and cost-effective operation	University of Strathclyde	May 2007 - May 2010	£458,563
Multimodal, Negotiated Interaction in Mobile Scenarios	University of Glasgow	May 2007 - October 2010	£273,604
Physics-based virtual environment for training in vascular interventional radiological procedures	University of Hull	May 2007 - November 2010	£342,005
Distributed Intelligent Learning Environment for Mammographic Screening	The University of Manchester	June 2007 - May 2010	£307,207
Distributed Intelligent Learning Environment for Mammographic Screening	University College London	June 2007 - May 2010	£315,605
An Edinburgh Speech Production Facility	Queen Margaret University Edinburgh	June 2007 - August 2010	£82,389

Type of award/Title	Institution	Date	Amount
<i>Standard Research Grants (contd)</i>			
Multimodal, Negotiated Interaction in Mobile Scenarios	Swansea University	June 2007 - June 2010	£397,097
Summer School in Computer Vision 2007-09	University of Essex	June 2007 - June 2010	£86,314
SASWAT: Structured Accessibility Stream for Web 2.0 Access Technologies	The University of Manchester	July 2007 - March 2010	£337,814
EPICENTRE - Earthquake and People Interaction Centre	University College London	July 2007 - June 2012	£895,596
D-SCENT: Raising challenges to deception attempts using data scent trails	Lancaster University	August 2007 - July 2010	£168,251
Understanding user innovation - Unanticipated applications of existing ITS	University of the West of England	September 2007 - August 2012	£856,117
Collaborating for Success in Natural Interfaces for Games, Rehabilitation, and Robotics	University of Nottingham	October 2007 - June 2008	£62,869
Enabling health, independence and wellbeing for psychiatric patients through personalised ambient monitoring (PAM)	University of Southampton	October 2007 - September 2010	£112,461
Enabling health, independence and wellbeing for psychiatric patients through personalised ambient monitoring (PAM)	University of Stirling	October 2007 - September 2010	£76,994
ShareIT: A theoretical and empirical investigation of co-located collaborative activities using shareable interfaces	Open University	October 2007 - September 2010	£330,321
Adaptive Sampling Algorithms for Cognitive Neuroscience Applications Using Bubbles	University of Glasgow	October 2007 - September 2010	£352,179
ShareIT: A theoretical and empirical investigation of co-located collaborative activities using shareable interfaces	University of Sussex	October 2007 - January 2011	£551,864
D-SCENT: Raising challenges to deception attempts using data scent trails	University of Nottingham	November 2007 - October 2010	£154,946
Network Architectures for Distributed Haptic Virtual Environments (HAPNet)	Queen's University of Belfast	November 2007 - April 2011	£357,623
Towards Context-sensitive Information Retrieval Based on Quantum Theory: With Applications to Cross-media Search and Structured Document Access	University of Glasgow	November 2007 - October 2011	£300,275
Mathematical Neuroscience Network	University of Nottingham	December 2007 - May 2011	£131,548
Enabling health, independence and wellbeing for psychiatric patients through personalised ambient monitoring (PAM)	University of Nottingham	December 2007 - December 2010	£81,553
D-SCENT: Raising challenges to deception attempts using data scent trails	University of Leicester	January 2008 - December 2010	£311,634
The perceptual organization of speech: Contributions of general and speech-specific factors	Aston University	February 2008 - January 2011	£371,204
Equipment Bid: Rapid Prototyping and Vacuum Casting to Support Robotics Research at BRL	University of the West of England	February 2008 - February 2011	£101,294
Wearable Biosensing and the Design, Documentation and Adaptation of Entertainment Experiences	University of Nottingham	April 2008 - February 2009	£87,892
... towards Real Virtuality	University of York	April 2008 - March 2009	£183,560
Multi-disciplinary Optimisation and Data Mining at Birmingham	University of Birmingham	April 2008 - March 2011	£357,570

Type of award/Title	Institution	Date	Amount
<i>Standard Research Grants (contd)</i>			
Towards Context-sensitive Information Retrieval Based on Quantum Theory: With Applications to Cross-media Search and Structured Document Access	Queen Mary, University of London	April 2008 - August 2008	£323,703
Towards Context-sensitive Information Retrieval Based on Quantum Theory: With Applications to Cross-media Search and Structured Document Access	Open University	April 2008 - October 2008	£335,105
Analysing Dynamic Change in Faces	Queen Mary, University of London	June 2008 - May 2011	£287,392
Analogue Evolutionary Brain Computer Interfaces	University of Essex	June 2008 - May 2011	£364,770
EnCoRe	University of Warwick	June 2008 - May 2012	£1,498,472
Analysing Dynamic Change in Faces	University College London	June 2008 - June 2011	£330,795
Computational natural language processing and the neuro-cognition of language	University of Cambridge	July 2008 - December 2011	£718,195
Visual and Behavioural Fidelity of Virtual Humans with Applications to Bystander Intervention in Violent Emergencies	Bournemouth University	July 2008 - July 2011	£348,142
Food Climate Research Network - Phase 2	University of Surrey	August 2008 - July 2012	£295,730
A Cognitive Perspective on Analogy-based Project Estimation	Brunel University	September 2008 - August 2009	£24,181
A Cognitive Perspective on Analogy-based Project Estimation	Southampton Solent University	September 2008 - August 2009	£71,548
A Biologically Plausible Spiking Neuron in Hardware	University of Liverpool	September 2008 - August 2011	£432,598
VALUE: Vision, Action, and Language Unified by Embodiment	University of Plymouth	September 2008 - August 2011	£297,092
Supporting Shy Users in Pervasive Computing	University of Sussex	October 2008 - September 2011	£1,052,216
Cognitive Systems Science	University of Reading	October 2008 - September 2011	£403,248
Visual and Behavioural Fidelity of Virtual Humans with Applications to Bystander Intervention in Violent Emergencies	University College London	October 2008 - September 2011	£202,311
Visual and Behavioural Fidelity of Virtual Humans with Applications to Bystander Intervention in Violent Emergencies	Lancaster University	October 2008 - September 2011	£288,215
PDP-squared: Meaningful PDP language models using parallel distributed processors.	The University of Manchester	October 2008 - September 2013	£812,212
Additional Modules for PAMELA to Enhance Research Efficiency (AMPERE)	University College London	October 2008 - September 2013	£2,106,322
A Biologically Plausible Spiking Neuron in Hardware	University of Ulster	October 2008 - October 2011	£251,730
Visualisation and Other Methods of Expression (VOME)	Royal Holloway, Univ of London	October 2008 - March 2012	£678,905
VALUE: Vision, Action, and Language Unified by Embodiment	University of Dundee	November 2008 - October 2011	£500,171
Visualisation and Other Methods of Expression (VOME)	University of Salford	January 2009 - December 2011	£393,552
Mobile VCE Strategic Partnership: User Interaction	London School of Economics & Pol Sci	January 2009 - June 2012	£117,064
Mobile VCE Strategic Partnership: User Interaction	University of Bath	January 2009 - June 2012	£208,957

Type of award/Title	Institution	Date	Amount
<i>Standard Research Grants (contd)</i>			
Biologically-Inspired Massively Parallel Architectures - computing beyond a million processors	The University of Manchester	January 2009 - December 2013	£892,622
KT-EQUAL: Putting ageing and disability research into practice	Sheffield Hallam University	January 2009 - May 2009	£1,873,016
Visualisation and Other Methods of Expression (VOME)	Cranfield University	January 2009 - January 2012	£398,378
Adaptive cognition for automated sports video annotation (ACASVA)	University of East Anglia	March 2009 - March 2013	£1,415,482
Generalized Nonlinear Models: Theory, Computation and Extensions	University of Warwick	April 2009 - March 2012	£314,116
Biologically-Inspired Massively Parallel Architectures - computing beyond a million processors	University of Cambridge	April 2009 - March 2014	£2,707,120
Mobile VCE Strategic Partnership: User Interaction	University of Glasgow	May 2009 - October 2012	£208,073
Adaptive cognition for automated sports video annotation (ACASVA)	University of Surrey	May 2009 - May 2013	£356,802
Perception of colour gradients in real and computer-simulated scenes: effects on depth	University of Bradford	May 2009 - August 2012	£376,715
Mobile VCE Strategic Partnership: User Interaction	University of Bristol	May 2009 - November 2012	£254,675
Biologically-Inspired Massively Parallel Architectures - computing beyond a million processors	University of Sheffield	June 2009 - June 2014	£583,693
The Spatial Integration and Segmentation of Luminance Contrast in Human Spatial Vision	Aston University	July 2009 - June 2013	£622,851
Sandpit: Airport Energy Technologies Network	University of Salford	July 2009 - October 2009	£201,103
Effective EPAC Knowledge Transfer (EFFEKT)	Cardiff University	August 2009 - July 2012	£126,565
Developing educational software to assess if autistic children can benefit from access to open learner models and emotional feedback on learning.	University of Bath	August 2009 - August 2012	£478,813
HEAT@UWE: Bridging the Gaps in Health, Environment And Technology (HEAT) Research	University of the West of England	September 2009 - August 2012	£480,577
Sandpit: CHARM: Digital technology: shaping consumer behaviour by informing conceptions of 'normal' practice.	Kingston University	September 2009 - August 2012	£920,134
EXTRAMS: Exploiting Traditional Map Signage with Mobile Devices	Lancaster University	October 2009 - September 2012	£83,549
Information Driven Optimisation of Care Pathways and Procedures	Imperial College London	October 2009 - September 2012	£2,090,292
The hospital of the future: integrated patient management in the digital hospital	University of Oxford	October 2009 - September 2012	£2,063,391
Inclusion through the Digital Economy	Newcastle University	October 2009 - September 2014	£12,006,957
Rural Digital Economy Research Hub	University of Aberdeen	October 2009 - September 2014	£11,764,897
Horizon: Digital Economy Hub at the University of Nottingham	University of Nottingham	October 2009 - September 2014	£12,459,687
Perception of colour gradients in real and computer-simulated scenes: effects on depth	University of St Andrews	October 2009 - October 2012	£353,801

Type of award/Title	Institution	Date	Amount
<i>Standard Research Grants (contd)</i>			
CHANGE: Engendering Change in People's Everyday Habits Using Ubiquitous Computing Technologies	Open University	November 2009 - April 2011	£201,849
"The smell of fear': feasibility study on the correlation of human smell and abnormal behaviour	City University	November 2009 - April 2011	£201,718
Towards an integrated neural field computational model of the brain	University of Reading	January 2010 - December 2010	£199,234
Cross-Disciplinary Feasibility Account : Computational Statistics and Cognitive Neuroscience	University of Glasgow	January 2010 - March 2011	£196,370
IDEAS Factory - Detecting Terrorist Activities: Shades of Grey - Towards a Science of Interventions for Eliciting and Detecting Notable Behaviours	Swansea University	January 2010 - December 2012	£1,050,296
IDEAS Factory - Detecting Terrorist Activities: Making Sense	Imperial College London	January 2010 - December 2012	£2,185,136
Biologically-Inspired Massively Parallel Architectures - computing beyond a million processors	University of Southampton	January 2010 - December 2013	£723,230
Participation in healthcare environment engineering	University of Warwick	January 2010 - January 2015	£1,102,267
Measuring the Security of Internet Infrastructure	University of Cambridge	January 2010 - January 2013	£291,819
Illuminating Colour Constancy: from Physics to Photography	Newcastle University	February 2010 - January 2014	£136,093
Illuminating Colour Constancy: from Physics to Photography	University of East Anglia	February 2010 - January 2014	£643,759
Synthetic Cognitive Systems	University of Nottingham	March 2010 - February 2015	£1,068,621
Pain rehabilitation: E/Motion-based automated coaching	Imperial College London	May 2010 - April 2014	£374,439
Pain rehabilitation: E/Motion-based automated coaching	University of Leicester	May 2010 - April 2014	£20,533
Pain rehabilitation: E/Motion-based automated coaching	University College London	May 2010 - April 2014	£1,154,532
Sandpit: SerenA - Chance Encounters in the Space of Ideas	University of Dundee	June 2010 - May 2013	£1,538,295
Sandpit: PATINA: Personal Architectonics Through INteractions with Artefacts	University of Bristol	June 2010 - May 2013	£1,467,705
Designing Effective Research Spaces Sandpit: SPIRES- Supporting People Investigating Research Environments and Spaces	Heriot-Watt University	August 2010 - July 2013	£153,376
<i>Technology Programme</i>			
CAD-GAME: Computer-Aided Game Design	Imperial College London	November 2008 - October 2011	£327,955
	University of York	March 2009 - February 2012	£27,251

## **Note on representation of numbers**

Data sourced from the Higher Education Statistics Agency are subject to their rounding strategy, which they describe as follows:

“Due to the provisions of the Data Protection Act 1998 and the Human Rights Act 1998, HESA implements a strategy in published and released tabulations designed to prevent the disclosure of personal information about any individual. These tabulations are derived from the HESA non-statutory populations<sup>1</sup> and may differ slightly from those published by related statutory bodies. This strategy involves rounding all numbers to the nearest 5. A summary of this strategy is as follows:

- 0, 1, 2 are rounded to 0
- All other numbers are rounded to the nearest multiple of 5

“So for example 3 is represented as 5, 22 is represented as 20, 3286 is represented as 3285 while 0, 20, 55, 3510 remain unchanged.

“This rounding strategy is also applied to total figures; the consequence of which is that the sum of numbers in each row or column will rarely match the total shown precisely. Note that subject level data calculated by apportionment will also be rounded in accordance with this strategy.

“Average values, proportions and FTE values prepared by HESA will not be affected by the above strategy, and will be calculated on precise raw numbers. However, percentages calculated on populations which contain 52 or fewer individuals will be suppressed and represented as ‘.’ as will averages based on populations of 7 or fewer.”

## **Acknowledgements**

HESA data are sourced from the HESA Student Record 2002/03 – 2008/09, the Destination of Leavers from Higher Education 2007/08 - 2008/09 and the HESA Staff Record 2006/07 and 2008/09. HESA cannot accept responsibility for any inferences or conclusions derived from the data by third parties.

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