

# **Researchers in higher education institutions**

**Scoping study of career development and  
human resource management**

**Report to HEFCE by Evidence Ltd**

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# **Researchers in higher education institutions:**

## **Scoping study of career development and human resource management**

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# Executive summary and recommendations

## Introduction and key outcomes

1. This is a scoping study, directed at increasing understanding of HRM as it applies to researchers in higher education. The study, intended to identify areas for further work rather than to produce comprehensive responses, focused on two related themes: motivational and reward systems, such as pay and career progression; and mechanisms for developing professional skills required by researchers. The report describes policy and practice regarding career development and human resource management for early career (junior) researchers in higher education institutions (HEIs) in England. The work was carried out by a consortium led by Evidence Ltd, reporting to the Higher Education Funding Council for England (HEFCE). The other partners were the Higher Education Policy Unit and the Centre for the Study of Law and Policy in Europe (HEPU and CSLPE, University of Leeds) and the Association of Research Managers and Administrators (ARMA).
2. The challenge for the research base is that inadequate motivational and reward systems could deter people with talent and ideas from entering research. Early career researchers are a major part of today's higher education (HE) research workforce and tomorrow's academic recruitment pool. The international excellence of UK research would be in jeopardy without a sufficient supply of high-quality people, but a research career is a realistic prospect only for a minority because the researcher numbers recruited annually far exceed the permanent posts available.
3. In science, early-career – or 'junior' - researchers are the 'pairs of hands' that principal investigators (PIs) require to carry out the research projects for which they acquire funding. Career structure in newer universities and across the social sciences and humanities is more complex. Establishing a common and satisfactory definition of early-career researchers is therefore contentious. There are both narrow and broad definitions that need to be used according to circumstance.
4. The main impression from review and survey is of a system in transition. There are deficiencies in motivation and reward, about which early-career researchers feel genuine and justifiable grievance. Surprisingly, it is not proven that this affects either recruitment or retention, but these deficiencies must detract from achieving the full potential of the research system.
5. There is an emerging awareness of the need for human resources (HR) and research management to find a common ground to address these deficiencies. The HE research base is grounded in a research culture and tradition that strongly defines the environment in which early research careers develop. That culture is demonstrably successful in delivering international excellence, which makes its customs and practices hard – and perhaps inappropriate - to challenge. Both HR and the research base need to pull in the same direction to address these deficiencies.

## Recruitment of researchers

6. The evidence from site visits and interviews with research staff revealed no evidence that a threat to the effectiveness of the research base arises from the present profile of recruitment - or retention - of early-career researchers in UK higher education. Recruitment was not identified as a general problem, at researcher or academic level. There are specific disciplines where there are national shortages, however, because of employment opportunities elsewhere.
7. The reasons for the present absence of a definable recruitment crisis may lie in the relationship between the HR function and the research culture. The individual's commitment to research, and their cultural motivation, may overcome deficiencies in HR systems of support and rewards.
8. More work is required to examine the unexplored issue of the quality of recruits to the UK research base. Systematic data monitoring needs to be initiated in a number of areas: the range of jobs advertised, the types of staff interviewed and recruited (including origins), and the shortfalls in skills and/or personnel.

## **Overseas researchers**

9. The movement of UK researchers overseas and of non-UK researchers into the UK system has been identified as a potential concern, and 'brain circulation' is under examination. Relatively more research staff are recruited from elsewhere now than in the past, but the number of UK domiciled researchers has also increased.
10. Research operates in a global market as do other sectors and increased mobility is an employment factor common to many professional and skilled careers. Networking is beneficial to knowledge flow. Concerns about the effect of this on researcher recruitment may be misplaced, since it affects most countries and many professional sectors. To resolve this, the issue will need to be explored further.

## **Disciplinary recruitment factors**

11. There are some important disciplinary and institutional differences within our general observations. There are some specific problem areas for recruitment in both science and social science, due to lack of supply or to attractive alternative career opportunities.
12. Growth areas in materials science, quantitative social sciences, accountancy, business and legal professional areas, and IT/media specialists are all experiencing systematically short-supply. These cause justified concern for institutional management, but they should not be seen as predominant.

## **Retention**

13. Whilst evidence from site visits suggests that fixed-term contractual status in itself does not impact upon the recruitment and retention of early career researchers, literature reviews and stakeholder interviews suggested a relationship between contractual insecurity and career attractiveness.
14. Some elements of fixed-term posts can make research careers unattractive and difficult to pursue in the long term. Working practices within a fixed-term context can also cause inefficiencies within the research system as a whole. The use of contract research staff in this context presents a number of opportunities and risks to early career researchers, principal investigators, HE institutions and the research base as a whole. The policies that are developed by institutions in response to the "Fixed-term Employees (Prevention of Less Favourable Treatment) Regulations 2002" government legislation must address these opportunities and risks at all levels.

## **Gender**

15. Women form a significant proportion of the supply of early career researchers (both in real terms and in terms of potential). Although the report identifies some key concerns shaping recruitment and retention, it is important to remember that gender and life-course shape responses to all of these and generate gendered outcomes. The recruitment, retention and representation of women in research careers are considered in more detail in annexed papers describing studies focusing specifically on gender and science careers.

## **Institutional HR strategy and practice**

16. The relative pay and working conditions of early-career researchers present a well documented human resources challenge that recent national initiatives have made only partial progress towards addressing.
17. The potential impact of the new legislation on fixed-term workers, in terms of the pressure to reduce the number of fixed-term opportunities and transfer existing positions onto permanent contracts, will have consequences – some of which will be potentially adverse - on the supply and quality of career entrants in the UK within the system as it currently stands.
18. We found that institutions have thus far generally been able to integrate their internal responses to multiple external initiatives:

- The professional staff responsible for HR and staff development have frequently anticipated the conclusions of national initiatives and have worked in parallel with, rather than in response to, them.
  - Where there has been duplication or overlap externally, this seems generally to have been 'managed'.
  - The greater problem is not one of inactivity but of ineffectiveness, where the central institutional response does not engage successfully with the distributed locus of employment, management and development in disciplines and departments.
19. The use of information technology to monitor research staff and to manage employment contracts and schedules is very variable. Systems such as the Careers in Research Online Survey (CROS), for example, have been widely but inconsistently used. This is probably a reflection of the diversity of underlying management information systems, and the need for any add-on package to work with local structures. It does not seem to reflect any view on whether one system is better or more useful.

## **Pay, motivation and rewards**

20. There is evidence of poor tangible rewards and limited implementation of formal training and review. Despite career uncertainties and the lack of financial reward, people are strongly motivated by the opportunity to participate in the [academic] research process.
21. There is evidence that pay, particularly for junior staff, has not kept pace with other sectors. It is difficult to assess the impact of pay on the recruitment and retention of research staff in HEIs, but there are a number of ways in which pay will affect the research base. Growth in student debt and perceptions of falling relative salaries may combine with changes in contract opportunities and lead to a genuine shift in 'desire' to enter a research career. This requires further scrutiny.
22. The new basis for contracts and employment is part of system transition:
- Movement towards longer-term employment contracts for career researchers is far more intention than implementation at present, and the extent of planning on this is varied.
  - Monitoring may reveal whether real change occurs but the outcome will not be simple to analyse because of the churn rate (flow and turnover) of research contracts.
  - The value of establishing a large tier of permanent research staff remains unproven and the implications for HEI resources will need to be reviewed. The traditional pattern of localised employment, essentially within the 'research group', may need to change.

## **Counselling, review and the role of the principal investigator**

23. The development of professional skills is constrained by the absence of consensus between the staff development/human resource domain and the research domain. This is not just about long-term career development but also about immediate returns in the professionalisation and enhanced skills of the HE workforce:
- A common ground needs to be created for principal investigators (PIs) and researchers on the one side and for HR and staff development on the other side to co-educate one another.
  - Some institutions identify the PIs as obstacles to - and therefore key agents of - change.
  - Opinions differ as to whether the growth in staff development programmes has been matched with tuning to the specific needs of research.
  - Stakeholders, such as the Research Councils, could help to create common ground by mediating or supporting the change process.
24. The prevailing research culture, a belief that research goals override those of professional good management, and the ability of principal investigators to continue to recruit talented staff are factors partly responsible for the lack of progress in effecting change in the system.
25. The management, review and appraisal of contract research staff remains an area of concern.

- Much professional development takes place in the research setting, and formal plans for this should now be a natural part of project planning but practice is extremely varied.
- While it would be wrong to claim that there is not some excellent practice, it is inconsistent and there are large gaps in implementation.
- The process of review is frequently amateur in principle and execution.
- Proper counselling for researchers in the last months of a contract is the management area least well addressed in almost all institutions.

### **Transition to academic posts**

26. For permanent academic posts, as for early-career research posts, there is no significant or pervasive lack of supply of suitable or well-qualified candidates (with the specific disciplinary exceptions we have identified before). There is, however, a growing component of staff from overseas. This has benefits for international networking but requires monitoring and has not affected the system uniformly.

### **Stakeholder roles**

27. Principal stakeholders - particularly those who are funding the research process - can have an enhanced influence on research career development, which could be explicitly embedded in the research process. PIs' research plans could be functionally linked to researcher development plans as a project funding requirement. If it was clear that Research Councils took an active interest, then PIs would be more than likely to respond. Other stakeholders and funding bodies might wish to emulate such a change.

## Recommendations

- I. Consideration should be given to indicators that might support a system of monitoring the quality of research staff recruited in higher education, although we find it difficult to identify such an index.
- II. The pattern of overseas recruitment (and recruitment more generally) should be monitored more closely in the future. This would be best carried out at institutional level using national guidelines to ensure comparability and making results available via a simple annual report on the number of appointing committees at this level and the proportion that had only overseas candidates to shortlist and/or to interview. Both nationality and where applicants have been educated should be recorded to monitor throughput from the UK education system (and to identify areas and/or disciplines where UK-educated researchers are not applying for research positions).
- III. The impact of the internationalisation of HE staffing needs further consideration in terms of regional and institutional diversity. This should be combined with a review of institutional policy and strategies in terms of recruitment.
- IV. Work should be done to assess changing graduate attitudes to research careers and the extent to which debt burden may discourage research postgraduate recruitment.
- V. The possibility of offering PhD students some measure of compensation against undergraduate debts for each completed year of postgraduate research training should be considered.
- VI. A systematic analysis of the numbers and status of unpaid researchers in HE should be carried out, with due account taken of associated benefits, costs and risks to host institutions and to the individuals. Formalisation of status should be considered, with some distinction being made for the diversity of categories at different levels of career development.
- VII. A solution to longer term employment would be a more collective employment base and a break from the unitary grant-researcher model to one more akin to other contract research organisations with 'many-to-many' links between technical specialists and research projects. A small number of university units use this model with great success. Its general application would, however, require a significant shift in the present culture of person and project ownership.
- VIII. Bridging funds - their availability and purpose - need to be more clearly advertised and better understood in most institutions.
- IX. Institutional strategies are changing. Benchmarks are needed for current monitoring to discern the extent to which these changes produce effective outcomes.
- X. A two-pronged HR focus - that works on management development for PIs as well as on the development of early-career researchers - should be adopted across the system.
- XI. It is unacceptable for appraisal to be carried out solely by the PI, particularly in the latter stages of any contract. An independent, senior member of staff should always be available as a co-mentor.
- XII. The Research Councils and other grant awarding bodies should, at the point of project initiation, request a brief career development plan from PIs relevant to the named researchers employed on the project (ideally, this plan should be submitted at the bid stage but this is unfeasible if the researcher has yet to be recruited). At the end of the grant, the Research Councils should ask both the institution and the named researcher whether the plan has been implemented.

# Introduction

## Background

1. This report describes the outcome of a scoping study to explore the current state of policy and practice regarding career development and human resource management (HRM) for early career researchers in higher education institutions (HEIs) in England. The work has been carried out by a consortium led by Evidence Ltd, reporting to the Higher Education Funding Council for England (HEFCE).

2. The focus of the study was set out in HEFCE's Invitation To Tender (July 2004):

"...as a first step towards increasing our understanding of HRM as it applies to researchers in higher education, we wish to place a contract for a scoping study of current activity. This should be focussed on two related themes:

- Motivational and reward systems for research activity, such as pay and career progression. These include institutional arrangements for the management of, and communication with, researchers; and national initiatives to stimulate supply and improve retention (which may apply to researchers in general or to underrepresented groups in particular); and,
- Mechanisms for developing professional skills required by researchers. We are particularly interested here in the development of people management skills, which links to the first theme.

"For each theme, there are five objectives:

- a. To describe current activity at national level and among a number of institutions;
- b. To map these activities against each other, thereby identifying areas of apparent duplication or inactivity;
- c. To analyse the different stakeholders implicated, including the roles of institutions and research funders and their objectives;
- d. To identify the impact of changes in employment legislation (particularly fixed-term contracts) and the institutional response in terms and conditions of employment.
- e. To identify the use of institutional staff surveys and to determine what linkages have been made with CROS or what scope there is to do so. The linkages could be in terms of data collection or the process of analysing and acting upon information."

3. The consultants appointed to carry out the work were Evidence Ltd, the Higher Education Policy Unit (HEPU) at the University of Leeds and the Centre for the Study of Law and Policy in Europe (CSLPE), also at the University of Leeds. We collaborated with Steff Hazlehurst, who was independently working on behalf of the Association of Research Managers & Administrators (ARMA) from the Thomas Coram Institute at the Institute of Education, University of London.

4. The work has comprised three main strands:

- CSLPE, which has worked on internationalisation, academic migration and diversity issues in this area, contacted to key informants, examined public policy documents, and reviewed the strategic HR plans of the institutions. Its four reports (available as downloads) are listed in Annex 1.
- Evidence and HEPU carried out a series of site visits to, and interviews at, universities and other HEIs across the English regions. The site visit reports are summarised in Annex 2.
- ARMA surveyed its members as to the current status of institutional plans for transferring research staff from fixed-term to permanent contracts. This is summarised in Annex 3.

## What is the perceived problem?

5. Researchers at an early stage in their careers are important because they form a major part of the HE research workforce and the recruitment pool for the academics of tomorrow. The development of early career researchers is a central part of the research process and consideration of one cannot be seen in isolation from the other.
6. An established career – in research or academia – is a realistic prospect for only a minority of early career researchers, however, as the Concordat on Contract Research Staff Career Management noted in 1997. The numbers recruited annually far exceed the permanent posts available, and this leads to the insecurity of uncertain, fixed-term contract cycles. This insecurity is compounded by historical under-investment in career management and guidance leading to potential – and implied – losses in productivity and of people<sup>1</sup>.
7. If a real or perceived problem with research career development exists, then it may do so on two levels or in two distinct policy agendas: first, at the level of the individual researcher; and second, at the level of the system (that is, the UK research base - subsuming the interests of some stakeholders such as institutions and research managers). For funded projects, it is research itself - and the production of codified knowledge leading to innovative products and processes – that is the key activity. As one respondent said:

“The principal investigators (PIs) own the projects and they own the people on the projects.”

Acknowledgement of this reality – as we shall discuss throughout this report – is essential to the effectiveness of both national initiatives and institutional implementation.

8. Most early career researchers are employed on fixed-term contracts with pay levels that some claim are uncompetitive against alternative professional careers and with low levels of certainty about continuation. Research projects and PIs can make onerous demands on researchers that can escalate their working hours and affect their personal life. The environment in which they work is typically driven and focussed, it can also be isolating and makes few concessions to those who are not fully engaged with the culture and ethos of this domain. The institutional provision for their professional management and development has been cited historically in policy reviews as haphazard and patchy.
9. System-wide, the international excellence of the UK research base would be in jeopardy without a sufficient supply of intelligent, able researchers. There would be too few hands to carry out present research and too few potential leaders to support the future research base.
10. The ‘problem’ therefore is that if institutional motivational and reward systems for research activity, such as pay and career progression, and mechanisms for developing professional skills required by researchers are seen – or come to be seen - as seriously inadequate then this could deter promising young people with talent and ideas from entering research careers. This would damage the UK’s international research performance<sup>2</sup>.

## What is an early career researcher?<sup>3</sup>

11. We can best review the outcomes of our work by considering the framework in which researchers develop their early careers, and the critical points of entry, development and transition. The diagram pictured in Figure 1 is one shared with people interviewed in this study. Change has been influenced by recent national initiatives - particularly by the Roberts ‘SET for Success’

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<sup>1</sup> See Ackers, H. L. and Bryony, G. (2005) Attracting and Retaining Early Career Researchers: Is there a Problem? *CSLPE Working Paper 2005-2*. Available at: [www.law.leeds.ac.uk/cslpe](http://www.law.leeds.ac.uk/cslpe). See Annex 1 in this report.

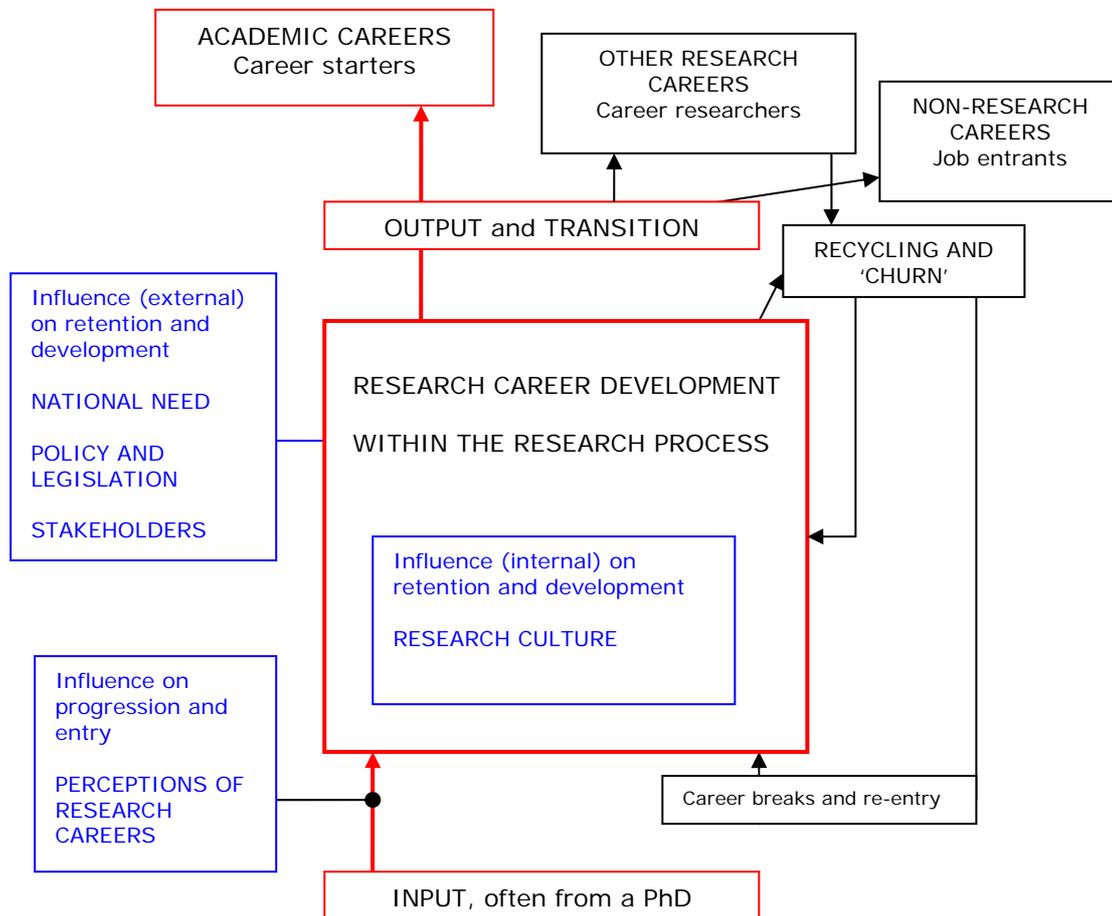
<sup>2</sup> There is a counter viewpoint which reminds us that these two agendas are linked but not necessarily dependent. Employment conditions for early career researchers might be deemed inappropriate, but they may not affect the health of the research base if the motivation to stay in research outweighed other considerations. By the same token, conditions could be improved for individuals without any noticeable gain for UK research.

<sup>3</sup> For a discussion of this complex issue, see Ackers, H. L. (2005) Academic Career Trajectories: Identifying the ‘Early Stage’ in Research Careers. *CSLPE Working Paper 2005-1*. Available at: [www.law.leeds.ac.uk/cslpe](http://www.law.leeds.ac.uk/cslpe). See Annex 1 in this report.

report<sup>4</sup>. It draws on Roberts' SET research trajectories, and most interviewees recognised this as a relevant reference point.

### **Figure 1 Early research career developmental pathways**

The main supply chain to the academic research base is in red.



12. The schema identifies these key stages, with each of which we can link specific policy issues:

- Recruitment into a research career:
  - Is there evidence of any shortage of recruits?
  - Does a research career appear attractive, in terms of likely intellectual and tangible rewards?
  - Are constraints, such as undergraduate debt, likely to offset the benefits?
- Retention during employment as a researcher:
  - What is the motivation and reward for working in research?
  - Are there social, financial or other factors that work against this?
- Development of the researcher:
  - Is there adequate HR support for personal and career development?
  - Is there adequate support for development as a research professional?

<sup>4</sup> SET for Success' (Final report, April 2002). In March 2001, Sir Gareth Roberts was asked by the Chancellor of the Exchequer and the Secretaries of State at the DTI and at the DfES to undertake a review into the supply of science and engineering skills in the UK: further information is available at: [www.hm-treasury.gov.uk/Documents/Enterprise\\_and\\_Productivity/Research\\_and\\_Enterprise/ent\\_res\\_roberts.cfm](http://www.hm-treasury.gov.uk/Documents/Enterprise_and_Productivity/Research_and_Enterprise/ent_res_roberts.cfm)

- Recruitment into the academic workforce:
    - Is there evidence of any shortage of recruits?
13. The original HEFCE tender used the concept of 'junior researchers' to describe the scope of the study. This raised a series of complex definitional issues for the team. The concept is often seen, in policy circles, as broadly synonymous with the status of the post-doctoral 'contract researcher' (in the traditional science model). In practice, the situation of early career researchers in UK HEIs is characterized by increasing diversity that reflects the specific labour market conditions in different disciplines and institutions and the changing funding regimes.
  14. 'Junior' also has both developmental and hierarchical components. Only one need necessarily apply and this difference identifies other functional distinctions between different career tracks (described by Roberts, 2004):
    - Career starters are at an early stage in a career that will lead to a permanent academic position and a senior role in the research base.
    - Career researchers are in a long-term and more mature career stage within a research group working under a principal investigator.
  15. For the purposes of the scoping study - which took place within a particular time frame - the work has focused on the situation of early career researchers in research-only positions: that is, mainly contract research staff working on externally-funded projects under the supervision of PIs and research fellows.
  16. Based on its research, CSLPE has produced a paper<sup>5</sup> that discusses in more detail the necessary limitations of this particular focus. The paper emphasizes the importance of adopting a broader definition, in any follow-up work, so to capture the increasing level of diversity and its projected impact on those areas currently experiencing supply problems (such as the fields of medicine and business, for example). This also raises important issues concerning the role and status of the doctorate in academic career paths.
  17. The academic workforce is becoming more complex, however, and definitions at all grades are being used in an increasingly flexible way. Evidence Ltd, in a study on highly skilled technicians in research<sup>6</sup>, noted that many technicians have been re-graded onto academic related scales and that many well established post-doctoral research assistants (PDRAs) are in practice performing very skilled and specialist but technical roles (??career researchers *sensu* Roberts??). In this study, we also encountered cases where research grade staff had been switched to administrative grades so as to enable access to a higher scale point. At the same time, the teaching side of the HE function is supplemented by a growing casualisation through teaching assistant posts – these posts are variously labelled but are normally fixed-term<sup>7</sup>.
  18. Consequently, while the site visit work rests on the definition of early career researchers as staff employed on RA1 and RA2, we recognise that this adheres most readily to a scientific career model and that employment and process are growing even more complex than Figure 1 already suggests.

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<sup>5</sup> See Ackers, H. L. (2005) Academic Career Trajectories: Identifying the Early Stage in Research Careers. *CSLPE Working Paper 2005-1*. Available at: [www.law.leeds.ac.uk/cslpe](http://www.law.leeds.ac.uk/cslpe). See Annex 1 in this report.

<sup>6</sup> Evidence (2004) *Highly Skilled Technicians in Higher Education*. Available at: [www.hefce.ac.uk/under/Publications/R&D/reports](http://www.hefce.ac.uk/under/Publications/R&D/reports)

<sup>7</sup> Oliver, L. and Ackers, H. L. (2005) Fixed Term Positions in the Academic Career Trajectory. *CSLPE Working Paper 2005-3*. Available at: [www.law.leeds.ac.uk/cslpe](http://www.law.leeds.ac.uk/cslpe). See Annex 1 of this report.

## Recruitment of researchers

19. With the important exception of some specific disciplines<sup>8</sup>, respondents in our site visit interviews agreed that there was no present research recruitment crisis. This is despite the overall growth in the researcher population in the last decade and the pay and motivation challenges highlighted by CSLPE<sup>9</sup>. This finding is consonant, however, with the recent Scottish Higher Education Funding Council (SHEFC) study<sup>10</sup>
20. Three issues to which attention should be drawn arose from our site visits and our interviews with key informants:
  - Changes in the quality of researchers are not readily assessed.
  - There are more early career researchers of overseas origin than before.
  - Graduate debt may influence the recruitment of research postgraduates.

These issues require monitoring because they may give rise to problems in the future and therefore their implications and dynamics should be under review by stakeholders now. We discuss the detail later in the report.
21. Recruitment pools to research posts will sometimes be limited because of the specific nature of research projects. However, this has always been the case. PIs agree that it is often difficult to find the ideal recruit on occasion. Institutional perceptions encountered in the site visits showed that there is no greater 'average' recruitment problem today than in the past.

## Quality of recruits

22. Because of the historical over-supply of postgraduates interested in pursuing research, it is entirely possible that all researcher posts could continue to be filled, but at a quality cost. Neither senior management nor PIs were prepared to accept that any hypothetical quality-deficit seriously affected appointments, although it was sometimes seen among *applicants* to some institutions.
23. This is perhaps too simplistic a response, but it is very difficult to judge whether there has been any change in the quality of recruits. The degree results of applicants should not be seen as a marker of quality, and there are few other quantitative or objective measures. Since secondary education also changes, the *qualities* of school-leavers - and their attitudes and work practices - are constantly shifting. Nonetheless, finding *quality* measures is an issue that may justify further consideration because it is so central to the maintenance of overall academic standards across HE.
24. More work is required to examine the subject of the quality of recruits entering UK higher education. Systematic data monitoring needs to be initiated in a number of areas: the range of jobs advertised; the type of staff interviewed and recruited (including origins); and the shortfalls in skills and/or personnel. As part of other work, CSLPE has commenced a pilot project aimed at mapping vacancies and selection processes in a specific HEI. This would provide a critical model for any larger programme that might be developed.

**RECOMMENDATION:** Consideration should be given to indicators that might support a system of monitoring the quality of research staff recruited in higher education, although we find it difficult to identify such an index.

## Overseas recruits

25. All universities reported an increase in overseas recruitment from east Asia, the EU, eastern Europe and from the US. This is reflected in the increased volume of visa-related work that every

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<sup>8</sup> For example, we were told that recruitment in finance and accountancy is extremely difficult because of salaries in the private sector. Many areas of law are also said to be problematic. Technology, materials and IT are reported as sectors with a strong industrial research base that proves an attractive alternative to academia.

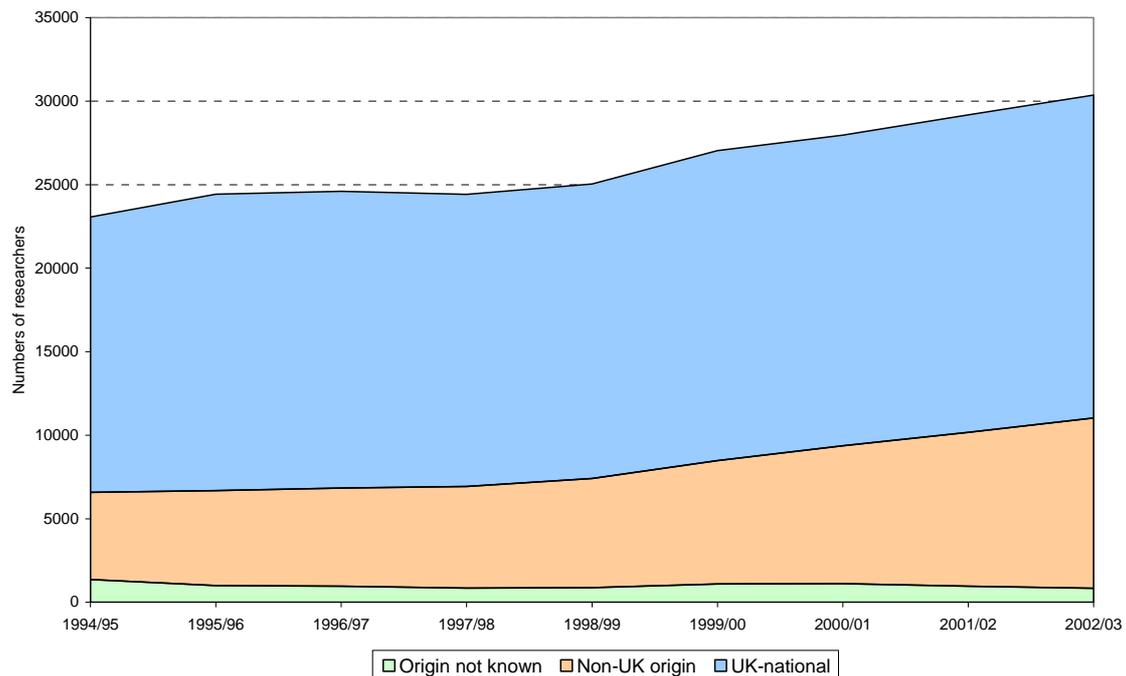
<sup>9</sup> Oliver, L. (2005) Rewards: The Issue of Pay. *CSLPE Working Paper 2005-4*. Available at: [www.law.leeds.ac.uk/cslpe](http://www.law.leeds.ac.uk/cslpe). See Annex 1 in this report.

<sup>10</sup> Scottish Higher Education Funding Council's (2005) 'Contract Research Staff in Scottish Higher Education Institutions Report 2004-05' refers to paragraph 48 to 'the relative ease with which institutions recruit CRS'.

HR department has experienced in the last few years<sup>11</sup>. The international mobility of researchers is increasing globally. However, individual countries experience different net inflows and outflows and this can prove a delicate balance. Robust comparative data on the movement of researchers, retention and return rates is not routinely collected.

26. The UK largely benefits from researchers' mobility as an attractive host country (due to issues such as language, facilities and reputation, international networks, open recruitment practices, and availability of positions: it is particularly attractive to dual career couples looking for two proximate positions<sup>12</sup>). One indicator of popularity is that the UK played host to 28% of all European researchers on the European Commission's Marie Curie Fellowships Scheme under Framework Programmes IV and V<sup>13</sup>.

**Figure 2 Numbers of researchers in the UK higher education research base**



Source: HESA analysis by Evidence. Data cover the following staff grades: Researcher A and B (PCEF scale); Research grade IA, IB and II (UAP scale); Researcher (CSCFC scale); HESA category 74 (Locally determined scale – Researcher).

27. Figure 2 may suggest that there is no evidence of a diminution in the supply of UK-national researchers. The growth in the population of researchers matches the real growth of research funding. The absolute numbers of UK-national researchers has in fact grown by about 17.5% in the last decade, from 16,500 in 1994 to 19,300 in 2003. The numbers of UK researchers has

<sup>11</sup> An indirect consequence of this is a significant new workload for HR staff. There is also a jeopardy issue for the early career researchers whose documents are often delayed in the 'system' either at the institution or elsewhere and who consequently find it difficult to travel and carry out their work. This was felt to be an onerous bureaucracy and was raised as a serious issue to be addressed.

<sup>12</sup> See Millard, D. (2005, in press) 'The Impact of Clustering on Scientific Mobility: A Case Study of the UK', *Innovation: The European Journal of Social Science Research*; Ackers, H.L (2004) 'Managing Work and Family Life in Peripatetic Careers: The Experiences of Mobile Women Scientists in the European Union', *Women's Studies International Forum*, 27(3), pp.189-201.

<sup>13</sup> Van de Sande, D., Ackers, H. L., and Gill, B. (forthcoming, 2005) *IMPAFEL: An Impact Assessment of the Marie Curie Fellowship Scheme*. Available at: [www.law.leeds.ac.uk/cs/lpe](http://www.law.leeds.ac.uk/cs/lpe)

therefore increased but the number of overseas staff doubled in the same period - from about 5,000 to about 10,000<sup>14</sup>.

28. Alongside recruitment from overseas there are concerns about the loss of skilled researchers from Europe, particularly to the US, but the extent of this is still unclear. There has certainly been a growth in the number of UK university staff recruited from overseas. This is most apparent for early career researchers - in 2002-03, 38% early career researchers were non-UK nationals compared to 18.5% of staff on all other grades<sup>15</sup>.

**Table 1 Staff nationality in English HEIs, 2002-03**

Nationality	All other Grades	% by nationality	Early career researchers <sup>16</sup>	% by nationality
United Kingdom	66,230	81%	13,663	62%
European Union	4,904	6%	3,150	14%
Asia	1,563	2%	2,062	9%
Other Europe	998	1%	928	4%
North America	1,772	2%	533	2%
Australasia	850	1%	419	2%
Africa	598	0.7%	321	1%
Middle East	284	0.3%	176	0.8%
South America	233	0.3%	171	0.8%
Unknown	3,869	5%	667	3%
Total	81,301	100%	22,090	100%

29. The majority of overseas staff working in the UK are from the EU. This proportion will increase as staff from 'other European' countries now in the EU are redefined in statistics. There has been speculation that as these countries become subject to free movement provisions within the EU there will be an increase in researcher mobility from them<sup>17</sup>. The second largest nationality group of overseas early career researchers are Asian.
30. Recruitment of overseas staff does not necessarily mean that the researcher has moved to the UK to take up the job: they may have been domiciled and/or have been educated in the UK prior to taking up a research position<sup>18</sup>. Increasing numbers of overseas students<sup>19</sup> are likely to further augment the numbers of overseas staff as they enter the recruitment pool for university positions.
31. We refer below to strategies regarding recruitment of academic staff from overseas.
32. The distribution of overseas early career researchers in HEIs is concentrated in certain regions - from 31% of overseas researchers in Yorkshire and Humberside to 41% in the South East and 45% in the East<sup>20</sup>. This shows that some areas - and, undoubtedly, some institutions - are

<sup>14</sup> A possibility, which we did not test, is that the redefinition of roles and the regrading of highly-skilled technicians would increase numbers of individual staff identified as 'researchers' without any underlying change. We suspect that the effect would be in fact marginal.

<sup>15</sup> See table 9 in Ackers H.L. and Gill B. (2005) *Attracting and Retaining Early Career Researchers in English HEIs: Is there a Problem? CSLPE Working Paper 2005-2*. Available at: [www.law.leeds.ac.uk/cslpe](http://www.law.leeds.ac.uk/cslpe). See Annex 1 in this report.

<sup>16</sup> This refers to staff on research-only contracts, on grades lower than senior researcher, who were either not entered or were of unknown status in the 2001 RAE. This definition has been used to draw data on early career researchers from HESA staff records, but it does not account for research active early career staff in other grades. For more discussion of these issues, see Ackers, H. L. (2005) *Academic Career Trajectories: Identifying the 'Early Stage' in Research Careers. CSLPE Working Paper 2005-1*. Available at: [www.law.leeds.ac.uk/cslpe](http://www.law.leeds.ac.uk/cslpe). See Annex 1 of this report.

<sup>17</sup> CSLPE is completing an Economic and Social Research Council-funded project on the issue of mobility in an enlarging EU. For further details, see the website: [www.law.leeds.ac.uk/cslpe](http://www.law.leeds.ac.uk/cslpe)

<sup>18</sup> Some 62% (1,705) of the fellows surveyed in the IMPACT Assessment of the European Commission's Marie Curie Scheme had previously lived abroad at some point prior to their fellowship (see Van de Sande, D., Ackers, H. L., and Gill, B. (forthcoming, 2005) *IMPAFEL: An Impact Assessment of the Marie Curie Fellowship Scheme*).

<sup>19</sup> The government set a target to recruit an extra 50,000 international higher education students by 2005 from outside Europe (DfES (2003) *The Future of Higher Education*. London: HMSO).

<sup>20</sup> See table 10 in Ackers H.L. and Gill B. (2005) *Attracting and Retaining Early Career Researchers in English HEIs: Is there a Problem? CSLPE Working Paper, 2005-2*. Available at: [www.law.leeds.ac.uk/cslpe](http://www.law.leeds.ac.uk/cslpe). See Annex 1 of this report.

recruiting more non-UK researchers than others. The reasons for this regional and institutional imbalance may deserve further study.

33. What has not been clear is whether overseas recruits are making up for a deficit in UK supply. We cannot say whether overseas appointees are successful because they are better than - or because they faced poor competition from - home-grown researchers. There were some suggestions, however, that shortlists are sometimes composed solely of overseas recruits because no suitably qualified UK candidate was available. This may be an issue that warrants further exploration.
34. The career trajectories of overseas researchers within the UK research base and the wider employment market are unknown. Some researchers will return to their 'home' country, or move elsewhere, while others will remain in the UK<sup>21</sup>. There is undoubtedly benefit in researchers moving to and from countries for the establishment of transnational research communities and knowledge transfer<sup>22</sup>. For those researchers that remain in the UK, the main concern is whether they will have equal chances to progress into the academic labour market (or that they have alternative career options). A corollary of this is whether the increase in overseas staff progressing into academic positions will have an impact on education delivery and ethos.
35. UK HEIs should not become complacent about the ability to attract and retain researchers from overseas as the global recruitment market is – as we are continually warned - subject to change. Policy should be consistent in promoting a sustainable academic labour force through two balanced approaches: first, developing an adequate and well trained national supply of graduates; and second, attracting strong overseas candidates by creating a competitive position comparable to or better than those available.

**RECOMMENDATION:** The pattern of overseas recruitment (and recruitment more generally) should be monitored more closely in the future. This would be best carried out at institutional level using national guidelines to ensure comparability and making results available via a simple annual report on the number of appointing committees at this level and the proportion that had only overseas candidates to shortlist and/or to interview. Both nationality and where applicants have been educated should be recorded to monitor throughput from the UK education system (and to identify areas and/or disciplines where UK-educated researchers are not applying for research positions).

**RECOMMENDATION:** The impact of internationalisation of HE staffing needs further consideration in terms of regional and institutional diversity. This should be combined with a review of institutional policy and strategies in terms of recruitment.

## **Recruitment of research postgraduates**

36. While there is no clear quantitative evidence that the numbers of UK applicants has declined - and that the number of appointees has increased - we received some anecdotal evidence that the situation may change. Again, we need to note a collateral 'quality' factor. We do not require just people, but the 'right kind' of people – intelligent, able and inquisitive - to deliver the required research outcomes.
37. Evidence/HEPU asked researchers not only about their own experiences and perceptions but also about their peers, and in particular about peers who had chosen not to go into research. The story that emerges is about a system in a process of change. At present, there is a low level of support for the idea that people with research potential have been 'put off' by negative perceptions of research careers. There is more agreement that those who had been high fliers as undergraduates but gone into non-research careers were destined to do so anyway, although such a choice might have been conditioned by prior perceptions about academia<sup>23</sup>.

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<sup>21</sup> There is little information about how many do return and how many make a permanent UK career. More data are needed and a longitudinal monitor of researcher mobility could be developed. Data from the IMPACT Assessment of the Marie Curie Fellowship Scheme shows that for respondents with postdoctoral or equivalent level fellowships held in the UK that had been completed, 55% (145) had already returned to their 'home country,' and 30% (85) were still in the UK following the fellowship.

<sup>22</sup> An OECD workshop in Brussels (March 2005) drew attention to this and the need for enhanced indicators to track flows and effects. See <http://www.belspo.be/rdinternationalisation/>

<sup>23</sup> There is little information on how those who made alternative research (or research-related) career choices perceive a career in the research base. A survey would be of value.

38. What we did learn, however, was that there is a supposed change in the current undergraduate population. It should be noted that the researchers that we met had generally graduated at least five years earlier. Since then, there has been a progressive shift in the financial position of the typical graduate, with accumulated debts now said to exceed £25,000 at some institutions.
39. CSLPE draws attention to work that suggests that levels of PhD studentship awards<sup>24</sup> may be a problem that would lead to reduction in supply, although they note that a comparative study does not show an adverse position for the UK compared to the rest of Europe. Nonetheless, the talented, high-flying graduate is faced with the choice of a Research Council studentship at £10,500 (figures for the year 2004/05) followed by an extended period at a modest scale point as a PDRA, or moving directly to an immediately better-paid post outside HE research. With a debt burden of this order the choice may seem stark. Since high earning management careers already attract some of the best and brightest<sup>25</sup>, further unforeseen shifts caused by internal changes in the HE system might be viewed with alarm.
40. The possibility is that awareness or perception of relative pay scales and earning potential may start to redirect even more talented people away from research. This was probably not foreseen and must surely not have been intended when student financing was restructured, but it could become an issue of very real concern for the research base and, indirectly, the wider economy.
41. If the numbers of able people entering postgraduate training is significantly reduced by greater awareness of uncertain career and salary prospects, then this will have a later effect on the number of potential recruits to the ranks of early career researchers. This is likely only to become apparent slowly over the next few years, and may be masked by initial quantity maintenance until the quality deficit becomes too great to ignore.
42. If debt does prove to be a disincentive to the pursuit of a research career then some system of debt relief could be introduced. This could be on the basis of cash payments or as relief of a fixed amount of undergraduate debt for each completed year of postgraduate research training<sup>26</sup>. As a further incentive of benefit to the system as a whole, this could be enhanced with a 'terminal bonus' for those students that complete and submit their PhDs within four years.

**RECOMMENDATION:** Work should be done to assess changing graduate attitudes to research careers and the extent to which debt burden may discourage research postgraduate recruitment.

**RECOMMENDATION:** The possibility of offering PhD students some measure of compensation against undergraduate debts for each completed year of postgraduate research training should be considered.

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<sup>24</sup> CSLPE also point out the anomalous position of PhD candidates as students receiving awards, although their role shades into the employee cadre of early career researchers. See Ackers H.L. and Gill B. (2005) *Attracting and Retaining Early Career Researchers in English HEIs: Is there a Problem? CSLPE Working Paper, 2005-2*. Available at: [www.law.leeds.ac.uk/cslpe](http://www.law.leeds.ac.uk/cslpe). See Annex 1 of this report.

<sup>25</sup> Provoking one of the commonly reported research recruitment deficit areas.

<sup>26</sup> The former would be uniform in effect, while the latter – while superficially attractive – might inappropriately favour the profligate. The possible solutions need further economic analysis.

## Retention of researchers

43. Neither institutions, nor PIs, nor individual researchers told us of systematic retention problems associated with research staff on contracts. Staff leave the research base regularly, of course, as short-term contracts come to an end because there are no further funds to employ them in that post. They may then move elsewhere – this is the recycling or ‘churn’ of recruits - or to a post in another sector.

## Work-life balance and research culture

44. Having made the commitment required to enter the research environment, the individual is not easily shifted into alternative career paths, whether counselled to do so or in the face of real obstacles. Tony Becher<sup>27</sup> - drawing on research in, particularly, physics and sociology – describes the tribal and ritual quality of research culture, one that also applies to other professions such as medicine and the law and where a key element is the ‘godfather’ – that is, the PI as patron - which we discuss later.
45. This is where the research culture most strongly locks into research careers. The process results in what would elsewhere be regarded as an inappropriate work-life balance. Initiation into what is seen as a desirable cadre is explicitly not expected to be ‘soft’. Indeed, its reification as a process of challenge to the candidate’s abilities was echoed in comments received from PIs in Evidence/HEPU site visits. It continues to be accepted by researchers as part of both developing and proving their competency.
46. ‘Retention’ - a positive attribute - is often contrasted with negative ‘wastage’. The latter concept is, in practice, hardly ever referred to in the context of HE researchers. It is unclear whether this is because the academic focus is entirely on the research rather than the individual or because such departures are acknowledged to be natural and inevitable, where supply exceeds demand and the system seeks to filter out the best.
47. There are many components to career motivation and development, all of which should affect the likelihood of retaining researchers in the HE research base. Working hours are almost universally agreed to be onerous, and this is reinforced by both our site visits and our literature review:  
“Scientists cannot stand constraints so they would work even at midnight and sometimes people have emailed me at midnight from my group, but if you start checking them they hate it”<sup>28</sup>.
48. Autonomy is variable, insecurity is high. The surrounding institutional and system structure appears insubstantial, however, by comparison with the disciplinary environment. The desire to be involved in research becomes a more powerful motivating factor than the demotivation occasioned by structural deficiencies<sup>29</sup>.
49. The ‘willingness’<sup>30</sup> of career entrants to ‘tolerate’ contractual insecurity and a compromised work-life balance reflects not only the quality of research positions in terms of employment status but also the potential that specific positions offer in terms of research experience and productivity. Fixed-term positions play a critical role in the development of a researcher’s career trajectory and research portfolio and thus should not be considered as inherently negative or exploitative.

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<sup>27</sup> Becher, T and Trowler, P R (2001) and Becher, T. (1989) *Academic Tribes and Territories*. SRHE/Open University Press. (2nd edition in 2001 with revised content). Becher quotes: “The [initiation] process begins when the neophyte enters a Tsigoloicos temple, whereby he more or less withdraws from the profane world; the subsequent trials, which sometimes take many years, involve a series of severe ritual abstinences, including the eating of impure foods, fasting, loss of sleep, infrequent bathing, etc. – all under the eyes of the old men of the clan, who serve him as godfathers” [From, Jones, R. A. (1980) Myth and Symbol among the Nacirema Tsigoloicos. *American Sociologist*, 15, 207-212].

<sup>28</sup> Male respondent to the ‘Mobility and Progression in Science Careers (MOBISC) project– see Oliver, L. and Ackers, H. L. (2005) Fixed Term Positions in the Academic Career Trajectory. *CSLPE Working Paper 2005-3*. Available at: [www.law.leeds.ac.uk/cslpe](http://www.law.leeds.ac.uk/cslpe). See Annex 1 of this report.

<sup>29</sup> Hockey (2004) reviews issues of visibility and of identity that motivate the researcher, even on the periphery.

<sup>30</sup> For more on this issue, see page 18 in Oliver, L. and Ackers, H. L. (2005) Fixed Term Positions in the Academic Career Trajectory. *CSLPE Working Paper 2005-3*. Available at: [www.law.leeds.ac.uk/cslpe](http://www.law.leeds.ac.uk/cslpe). See Annex 1 of this report.

50. Having chosen research, people are not lightly persuaded to favour 'lesser' alternatives. At the end of the path is a career in a university. For some, the goal is a fully tenured academic post, while for others it is more interesting to concentrate solely on research. The rewards are very personal and emerge from engagement with the process of discovery, innovation and ownership<sup>31</sup>. There are few careers that allow the individual so much opportunity to define their work activity, sometimes to determine their work programme, and then have so much personal ownership of lasting outcomes.

## Unpaid retention

51. The balance between research work and the quality of life may become extreme, as revealed by a recent report in the Times Higher Educational Supplement<sup>32</sup>. If some are willing to do this, then it is unsurprising that the pay and prospects offered to those in employment are usually enough to retain the rest.
52. People are prepared - or so it appears from interviews - to continue to carry out their research duties unpaid, barely acknowledged and with no tangible benefits in the hope that the PI with whom they work might be able to secure further funding<sup>33</sup>. This is accepted within the research culture as normal, even laudable, behaviour. The individual 'sacrifice' may be seen as potentially creating an obligation on the part of the host to make some compensation.
53. An objective analysis might indicate that this behaviour is not only rather aberrant, in general employment terms, but is creating implied commitments of which the parties seem unconscious. This may be because there are often individuals in grey relationships with a HEI – including part-time self-funded research students, retired employees, and visiting researchers.
54. It would be considered bizarre in most sectors for an employee to continue to work after a contract had terminated<sup>34</sup>. Normally, for many companies, the former employee would not normally have access to the workplace.
- The unpaid HE researcher continues in place because they perceive a net benefit. They give free labour but gain status and maintain identity. They perceive the best route to a future research career as continued 'ghost' research that produces evidence of research credibility in the form of engagement with or, better, production of knowledge.
  - The proximate employer – the PI - presumably benefits by seeing incomplete work brought to fulfilment, delivering on an unfinished contract or extending a completed project. They gain at the marginal cost of releasing some space and perhaps some consumables.
  - The former employer, the host institution, gets real benefits in the form of unrewarded services.
  - An implicit contract may arise when the HEI accepts these services. In practice the 'unpaid employee' provides such services without benefiting even from a minimum wage. Further, they have no formal status in relation to either health and safety or other areas of research management.
55. The longer term sense of this is difficult to interpret. The practice is clearly based on established custom but it departs from normal and professional employment values. The subsequent employment status of those who work unpaid is unknown.
56. The normal professional career step that involves unpaid work experience is immediately after graduating and prior to entry to the professional career structure. This is an opportunity, during a period of light commitments, to experience the work, to develop appropriate culture and competency, and to create some initial evidence of ability. There is therefore rather little parallel with an older, highly qualified researcher who already has at least one contract under their belt. It

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<sup>31</sup> Hockey (op cit) describes three groups of researchers who all "viewed the production of new knowledge and its application as positively affirming".

<sup>32</sup> 'Desperate contract staff work for no pay', *Times Higher Educational Supplement*, 4<sup>th</sup> February 2005. This front page article reported on a study carried out by Hockey in 2004 which examined a group of 60 contract researchers in the social sciences.

<sup>33</sup> We spoke to individual researchers who planned to or had actually done exactly this. Hockey (op cit) gives case studies of the same phenomenon.

<sup>34</sup> This is quite different from unpaid work experience for the ingénue seeking a first step on the career ladder, and different also from the research visitor and from the continued presence of the retired expert.

was suggested, however, that there are examples that may indicate appropriate templates: these include conservation volunteers, parent assistants in schools and hospital visitors.

**RECOMMENDATION:** A systematic analysis of the numbers and status of unpaid researchers in HE should be carried out, with due account taken of associated benefits, costs and risks to host institutions and to the individuals. Formalisation of status should be considered, with some distinction being made for the diversity of categories at different levels of career development.

### **Prolonging retention and the shift to ‘permanency’**

57. Site visit interviewees suggested that retention breaks down not because researchers leave but because the money runs out<sup>35</sup>. Skills are then lost from a research group, although not necessarily from the research base. Since most research funding is competitive, a shift of skilled researchers to new projects need not be seen as systematically deleterious. However, repeated disjunction between research and career developments does seem slightly dysfunctional.
58. Institutions are reviewing research staff fixed-term contracts and claim to be gradually converting arrangements for those staff who have completed four years’ contract research to open-ended contracts.<sup>36</sup> Any analysis of changes in contractual status will be masked by staff shifting between contracts and institutions. HEFCE data analyses of statistics on staff moving between temporary and permanent contracts clearly show that, at least up to 31 July 2004, there had been little movement towards permanent contracts. Post-1992 institutions were the more active, but at a level of only a few percent, and the data show little variance from the changes in the previous year. ARMA (Annex 3) comments that those institutions that were moving to permanent contracts were only beginning to do so at the end of 2003/04, so the balance of numbers reported to HESA may begin to change in the next annual report.
59. We note the April 2005 report from the Scottish Funding Councils (see footnote 10), on contract research staff, which reports a significant shift from fixed-term contracts to permanency in Scotland. It was too late to absorb this work in this study but it should certainly be a reference point for any further studies in England.
60. The CSLPE review of HR strategies and interviews with key stakeholders in the trade union sector suggests a focus, at least in terms of employment status, on the increasing number of staff employed on temporary lectureships and teaching-only positions. To the extent that there has been an effort to shift staff off temporary and onto permanent contracts, this is mainly taking place in the case of lectureships and not early career researchers<sup>37</sup>.
61. The vast majority of researchers who fall within the working definition of early career researcher adopted within this report are employed on a fixed-term and full-time basis to conduct research (see Table 2). This type of position is clustered within some academic disciplines - particularly the natural sciences - and within some institutions - particularly the research intensive institutions. However, it is to be noted that the use of fixed-term employment within the sector as a whole is not confined to this ‘model’ – there is a growth in fixed-term teaching-only posts and temporary lectureships<sup>38</sup>.

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<sup>35</sup> CSLPE suggests that the attrition rate may, in reality, be higher than university management acknowledges. See Ackers H.L. and Gill B. (2005) Attracting and Retaining Early Career Researchers in English HEIs: Is there a Problem? *CSLPE Working Paper, 2005-2*. Available at: [www.law.leeds.ac.uk/cslpe](http://www.law.leeds.ac.uk/cslpe). See Annex 1 of this report.

<sup>36</sup> See Annex 3 – The ARMA survey of implementation of permanent contracts for research staff. The survey shows that pre-1992 universities have made progress towards issuing permanent contracts. The most likely position that will be reached by 2006 is for researchers’ performance and future commitments to be reviewed as they approach their four-year anniversary, with a view to permanency at that point.

<sup>37</sup> See page 13 in Oliver, L. and Ackers, H. L. (2005) Fixed Term Positions in the Academic Career Trajectory. *CSLPE Working Paper 2005-3*. Available at: [www.law.leeds.ac.uk/cslpe](http://www.law.leeds.ac.uk/cslpe). See Annex 1 of this report.

<sup>38</sup> See pages 5-7 in Oliver, L. and Ackers, H. L. (2005) Fixed Term Positions in the Academic Career Trajectory. *CSLPE Working Paper 2005-3*. Available at: [www.law.leeds.ac.uk/cslpe](http://www.law.leeds.ac.uk/cslpe). See Annex 1 of this report.

**Table 2 Early career researchers<sup>39</sup> in English HEIs, by contract type and mode of employment, 2002/03**

	Total %	Full-time %
Casual	0.1	0.02
Fixed	96.1	96.3
Permanent	3.8	3.6
Total	100	100

Source: HESA data, analysed by CSLPE

62. Where early career researchers on fixed-term contracts leave the sector it is unclear whether this is caused by the short-term nature of research funding itself or other factors such as individual 'choices' or mechanisms for dealing with poor performance. Whilst evidence from the site visits suggest that fixed-term contractual status *in itself* does not impact upon the recruitment and retention of early career researchers, the literature reviews and stakeholder interviews by CSLPE link contractual insecurity with the attractiveness of research careers<sup>40</sup>. A greater understanding of the processes within the cycle of fixed-term employment renewal - or churn - associated with the UK grant award system will shed light on the extent to which the current system dissipates and conserves human capital.
63. Just as the processes leading to the exit of researchers *from* the sector are unclear, so are the flows *into* permanency within the sector. HESA data reflects the pre-eminence of the 'lectureship' as the dominant career path in the UK HE system<sup>41</sup>. However, the size and scope of the recruitment pool for lectureships is not clear. Some of the PIs interviewed within the site visits, for example, suggested that the most promising candidates (identified by Roberts as 'career starters') were clearly identifiable even as they entered the early career researcher stratum. Furthermore, alternative models for developing both career progression and permanency have been promoted within key policy initiatives and have been developed within some institutions. The Fixed-term Employees (Prevention of Less Favourable Treatment) Regulations 2002, which introduced measures to prevent the abuse of successive fixed-term contracts, demands an institutional response to issues of permanency.
64. The present use of fixed-term contracts in project-based research is a direct outcome of the way in which research is funded within the UK. This funding system creates structures within which particular employment practices develop. An emphasis on income generation through project-based research funding and the impact of the RAE adds a new dynamic to employment roles and relationships within HEIs that has critical implications for 'early career' researchers and PIs who are increasingly involved in both project and people management.
65. The use of contract research staff in this context presents a number of opportunities and risks to early career researchers, PIs, HEIs and the research system as a whole. It is critical that the policies that are developed by institutions in response to the Fixed-term Employees (Prevention of Less Favourable Treatment) Regulations 2002 respond to these opportunities and risks at all levels.
66. Research staff themselves also have concerns. They believe that institutions may be reluctant to extend contracts because of the obligation that prolonged employment entails. At the same time, they perceive posts becoming 'blocked' as the present generation shifts into open-ended employment and the traditional pattern of constantly renewed gaps and opportunities dries up.
67. The views of PIs were more mixed. At some institutions there was a relaxed approach to a new system that would need time to work itself out and settle. Others thought that the new contract structure would make rather little difference in practice. But elsewhere there was more pronounced concern about the loss of individual flexibility and the freedom to control

<sup>39</sup> This refers to staff on research-only contracts, on grades lower than senior researcher, who were either not entered or were of unknown status in the 2001 RAE. Whilst this definition has been used to draw data on 'early career researchers' from HESA staff records, we recognise that this definition does not account for research active 'junior' staff in other grades. See CSLPE Paper 1 for more in-depth discussion of these issues.

<sup>40</sup> See page 8 in Oliver, L. and Ackers, H. L. (2005) Fixed Term Positions in the Academic Career Trajectory. *CSLPE Working Paper 2005-3*. Available at: [www.law.leeds.ac.uk/cslpe](http://www.law.leeds.ac.uk/cslpe). See Annex 1 of this report.

<sup>41</sup> See page 5 in Oliver, L. and Ackers, H. L. (2005) Fixed Term Positions in the Academic Career Trajectory. *CSLPE Working Paper 2005-3*. Available at: [www.law.leeds.ac.uk/cslpe](http://www.law.leeds.ac.uk/cslpe). See Annex 1 of this report.

appointments. There was a belief that new costs would emerge and that these had yet to be understood.

68. Institutions – as reflected in the planning of their HR departments - generally reported in Evidence/HEPU interviews that they were prepared for the changes. CSLPE's analysis of written strategies presents a less sanguine analysis<sup>42</sup>. In fact, the institutions have many options open to them. The appointment of more generalist staff who can be readily re-deployed is one, but few institutions believe they are actually likely to take this route. The terms and conditions of the new open-ended contracts were thought likely generally to be somewhat different to those of typical academic staff, particularly in the context of redundancy. The expectation of tighter rules about appointments is common, and there seems to be an increased likelihood of more formal review after a first contract and less likelihood of simple or automatic renewals after four years. The cost of redundancy is also being considered, and institutions expect to have dialogue with stakeholders and research funding agencies about the implications of this. At the simplest level, a redundancy fund supported by a tax on research income is a typical expectation.
69. Serial employment should not be confused with developmental progress. In some disciplines it is rare to move to a permanent position after only one fixed-term research contract. There is a significant amount of recycling 'churn' of research staff into new contracts, but the quality of (self-) management will influence whether this is treading water or true progression. Both researchers and PIs saw negative factors in these prolonged cycles.
70. The researcher in the following excerpt draws attention to additional concerns around the repeated nature of fixed-term positions and the risk that if you progress through the pay scales then you price yourself out of contract research. It is widely believed that the higher salary points associated with older researchers makes their continued employment problematic since it makes research proposals appear 'uncompetitive'.

"It's not so much the temporary contract in itself, it's the career progression as a post-doc. You have the feeling that yes, it's fine to do a post-doc for two years, yes it's fine to do a post-doc for four years but six years that's a bit off. The older you become you become a. more experienced, b. more expensive and it's difficult for an employer to employ you and it's difficult for yourself to develop if you want to develop as a scientist so this is the biggest problem."<sup>43</sup>

Among staff, at one extreme was the view of a mathematician:

"If the guy is well on in his second contract he isn't going to make it."

In disciplines in which two (or more) full terms as a PDRA are quite normal there is a real opportunity to realise and demonstrate individual competence, but the system needs structures to assess and validate this.
71. What 'making it' refers to is the transfer to independent research: the assumption that the researcher is principally interested in an academic career. Encapsulated here is a widespread view of the initiation and apprenticeship model. This model may become erroneous if the number of opportunities for permanent research careers grows, but the employment and pay structures to support that are still unformed.
72. Similar comments were made elsewhere, however, and there were many PIs who suggested that the high fliers - tomorrow's research leaders (Roberts' *career starters*) - were entirely identifiable even as they entered the early career research stratum. If this is the case then there is an obligation on institutions to ensure that researchers cycling into a second contract, open ended or not, have their career realities made absolutely clear.
73. Given that the forecast shift to open-ended contracts occurs, then plans for redeployment mechanisms and for bridging funds become important, to create more structured management of employment. Bridging funds - moneys that support a researcher between pulses of external funding - are extremely confused. Most institutions seem to have such funds but they are called different things, their existence is not known to all parties and it is often claimed that the

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<sup>42</sup> CSLPE summarised its review of a selection of HR strategies in this respect as "mainly defensive and unprepared".

<sup>43</sup> Male MOBISC respondent [068]: see Oliver, L. and Ackers, H. L. (2005) Fixed Term Positions in the Academic Career Trajectory. *CSLPE Working Paper 2005-3*. Available at: [www.law.leeds.ac.uk/cslpe](http://www.law.leeds.ac.uk/cslpe). See Annex 1 of this report.

circumstances under which they can be accessed are unduly restrictive. Other institutions that do not have explicit funds nonetheless support bridging in practice<sup>44</sup>.

74. Redeployment is tricky, because of the specialised nature of the researcher's profile. Even within a department it may be difficult for a researcher to move from one laboratory to another, and the PIs can have strong views on their right to select from a wider pool with greater focussed specialism. A further constraining factor is cost and the question of 'who pays?'<sup>45</sup>
75. Some specialists gain a technical scarcity value. Moving between disciplines is generally unlikely, except where the specialism becomes a generic skill as it does, for example, for a mathematician moving into data modelling. Highly skilled quantitative researchers are, we were told by such an individual and by ESRC, particularly prized in social science. Under these circumstances, a willingness to fill a specialist service role can make a researcher more employable than a generalist, even if they do not become independent. However, without some reasonable host funding base they may need to be prepared for a peripatetic existence.

**RECOMMENDATION:** A solution to longer term employment would be a more collective employment base and a break from the unitary grant-researcher model to one more akin to other contract research organisations with many-to-many links between technical specialists and research projects. A small number of university units use this model with great success.

**RECOMMENDATION:** Bridging funds - their availability and purpose - need to be more clearly advertised and better understood in most institutions.

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<sup>44</sup> CSLPE suggests that the confusion on bridging funds hampers their ability to work effectively – see page 13 in Oliver, L. and Ackers, H. L. (2005) Fixed Term Positions in the Academic Career Trajectory. *CSLPE Working Paper 2005-3*. Available at: [www.law.leeds.ac.uk/cslpe](http://www.law.leeds.ac.uk/cslpe). See Annex 1 of this report.

<sup>45</sup> See also page 9 in Oliver, L. and Ackers, H. L. (2005) Fixed Term Positions in the Academic Career Trajectory. *CSLPE Working Paper 2005-3*. Available at: [www.law.leeds.ac.uk/cslpe](http://www.law.leeds.ac.uk/cslpe). See Annex 1 of this report.

## Gender and research careers

76. We have chosen to separate a number of issues that arise in respect to gender. These cut across recruitment and retention but relate most acutely to long-term retention across the research and academic base. The core issue is quite simple: while many women enter early stage research careers, much fewer progress to permanent and senior positions. This disparity indicates an inactive pool of research talent and the UK would benefit from addressing the barriers that create this situation.
77. CSLPE's papers focus on gender, particularly on the relationships between gender and progression, and gender and pay<sup>46</sup>. A recent report from the Higher Education Policy Institute<sup>47</sup> summarises the shifting numerical balance from PhD awards (58% men, and 42% women) to academic posts (where women make up 38% of overall staff and only 15% among professorial grades). Consequently, whereas almost 60% of men in HE are in permanent posts, this is true of only 48% of women (see Table 6 in Ackers and Gill, 2005). This is not a UK phenomenon but is reflected generally across Europe<sup>48</sup>. This in turn affects pay differentials, because women are more frequently employed in fixed-term posts and are less likely to have progressed to higher salary points.
78. CSLPE notes that the UK Athena project<sup>49</sup> identifies three hurdles in academic careers that women academics may have to navigate:
- 'Getting In' - there are gender differences in approach to and negotiation of progression in a research and academic career
  - 'Getting Back' – return after a career break (often associated with caring responsibilities) may have to surmount the loss of momentum compared to peers' research and careers
  - 'Getting On' - there is a career-long process to achieve and maintain a level of performance commensurate to skills and ambitions affected by issues around work-life balance.
79. The problems associated with these stages, combined with pressures to achieve 'performance indicators' (often research outputs) in order to progress, goes some way to explaining the unequal representation of women in more senior grades in academia. CSLPE concludes that pay is not a critical issue in regard to the retention of women but that security and working conditions may well be. Motivation factors for men and women differ, but the flexibility of an established academic career is less available to those in early career development.
80. This is borne out by the experience garnered during Evidence/HEPU site visits. On the one hand, some women researchers referred to a research culture that promoted a work ethic of long and unsocial hours, alienating those who were committed as carers to a different work-life balance. This might be seen as a necessary concomitant of an apprenticeship model, not unsuitable for those at an early stage in their careers. On the other hand, however, more specific instances were given that chime with the Athena hurdles.
81. For example, additional support may not be brought in to substitute for staff who take leave to start a family:
- "There was no problem in arranging maternity leave but when I came back my supervisor expected me to make up for the work that hadn't been done while I was away";
- The problems of additional workload may be compounded by unsympathetic responses to new responsibilities:

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<sup>46</sup> Ackers H.L. and Gill B. (2005) Attracting and Retaining Early Career Researchers in English HEIs: Is there a Problem? *CSLPE Working Paper, 2005-2*; Oliver, L. (2005) Rewards: The Issue of Pay. *CSLPE Working Paper 2005-4*. Available at: [www.law.leeds.ac.uk/cslpe](http://www.law.leeds.ac.uk/cslpe). See Annex 1 in this report.

<sup>47</sup> Sastry, T (2004) HEPI Report no. 14 'Postgraduate Education in the United Kingdom'. Higher Education Policy Institute, Oxford.

<sup>48</sup> European Commission (2004) Third European Report on Science and Technology Indicators. DG Research.

<sup>49</sup> See page 23 in ASSET (2003) *The Athena Survey of Science Engineering and Technology in Higher Education*. Report 26. Norwich: UEA.

“She [the PI] just didn’t understand that I had to leave to pick up [the baby] from the nursery. They kept arranging meetings late in the day or changing things at short notice.”

82. The consequence of meeting these hurdles is that women researchers move out into the pool of underused talent to which CSLPE refers. However, the route to restoring the gender balance is not gender-specific but through addressing central issues of career development and HR management for research staff.

## Institutional HR strategy and practice

83. The system is in a process of change and many institutional initiatives will take time to show results. This is therefore an area to continue to monitor for the future, with the acknowledgement that the picture is moving and our snapshot is blurred.
84. The conclusions reached by CSLPE’s review of institutional HR strategy statements in regard to junior researchers and their career development are mixed. This may reflect partly the extent to which good practice is indeed evolving and partly a pervasive feeling that there is no recognised institutional problem in this regard. In regard to the broad picture of research and careers, many HR strategies focus key actions on the senior stratum of research stars, not on recruitment at junior levels. Performance pay and golden handshakes are almost exclusively directed towards the top group. The Evidence/HEPU site visits suggest that this may reflect the lack of any institutional need to create additional motivation for research-career entrants. Study leave, sabbaticals and encouragement to engage in enterprise and income generation are sometimes directed to ‘young’ or new researchers, but this is almost invariably interpreted as referring to those already on permanent posts and not to contract research staff.
85. The overall conclusion from the site visits was to confirm CSLPE’s view that, in the main, current HR strategies for researchers express plans and intentions. They capture practice in transition and are not yet grounded in established procedures. This is not to criticise the volume of good practice that is being nurtured but to recognise a continuing reaction to internal and external stimuli.
86. A regular meeting ground between research and HR functions is needed but was missing from most of the institutions we visited. HR professionals do not usually have a research background, and many research leaders make their feelings about this abundantly clear. At the same time, few PIs have any significant formal training in either staff or resource management, being part of a generation that preceded developments such as the Master of Research (MRes) course. Research is a leading function within institutional plans - driven by the high profile of research assessment and the tangible rewards of success – and can be a world unto itself, as much in employment matters as in others.
87. HEFCE has contributed to the development of institutional plans not only through its requirements for formalised HR strategies that address these issues but also through the development of good management practice. In this regard the report from the University of Sheffield<sup>50</sup> is a key document that has been widely used in the UK. It presents an integrated approach to induction, career building and contract review that has sometimes been explicitly adopted and has influenced others.
88. CROS is another management tool and is used in some institutions; in others it is hardly used at all. There seems to be no clear pattern to this and we believe that it may be conditioned as much by individual familiarity as any other factor. Certainly, the evidence of its diverse use suggests that it has substantial potential value but a constraint may be that it does not suit all management information systems.

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<sup>50</sup> Campbell, J, Crook, T, Damodaran, L, Kellett, B and Valerio, R (2003) Supporting Research Staff: making a difference. The University of Sheffield as part of the HEFCE Good Management Practice initiative.

## Career and professional development

89. The development of specific work-related skills should take place primarily as part of the research process, whereas more generic professional skills can be mediated through central provision. The PI has a direct responsibility for ensuring that the former takes place (although this responsibility is not necessarily identified formally or accepted) and also for creating and providing opportunities for the development of leadership and independence. The latter is an institutional obligation.
90. The problem for most national initiatives in this policy area, over the last several decades, has been that they are self-limiting in their impact. They tend to focus only at the level of the system and hence of the institution. Their engagement is primarily with the central HR facility rather than with the distributed function responsible for research strategy, the research process itself. They rarely recognise disciplinary distinctions.
91. The effect of the recent Research Careers Initiative (RCI), for example, has been widely disputed<sup>51</sup>. Its effects are being built upon and extended, however, by the work of the Roberts Review and the stimulus this has had on thinking in institutions and among stakeholders. One major stakeholder argued:
- “We have only just got into proper funding for this, but every recommendation has been funded. Liaison is improving and there is money for skills development and retention. We need time to see how this is going to work.”
92. A similar view was echoed among institutions. It was evident that not only leading research institutions but some less research intensive universities had built on the RCI and anticipated many of the key points in Roberts’ SET review. A ‘two-pronged’ approach is being employed by some institutions:
- Career development provision for early career researchers (almost all institutions)
  - Management development for PIs (some institutions)
93. On the first prong, an increasingly wide range of provision is available to researchers in the form of staff development courses and workshops. Some are directed towards developing skills of immediate value within the institution while others take the longer term view of building a base of professional and generic competencies. Personal development plans for researchers are also being introduced, or at least considered. These provide the individual with the opportunity to build a record and portfolio of their achievements, but in the research context they may seem lightweight compared with a series of research papers and conference presentations.
94. The reason why some HR departments also choose to address the second ‘prong’ is that formal professional development that meets conventional HR standards has to address the culture clash between the HR strategy and the research process. This cannot be done through the researchers alone, because their views and reactions are conditioned by the PIs and the culture within which they work.
95. If, for example, early career researchers do not choose to take note of what is available or to accept its personal relevance, this may be partly because of career trajectories (*sensu* Roberts) and the supposition that HR programmes are directed at those on a trajectory that leaves the ‘preferred’ career environment of research and academia.
96. The view - that “HR is for those who won’t make it” - is reinforced by the PIs. Many do not accept that HR has anything to offer the professional development of their research staff, and make these views known to the centre of the university:
- “You don’t understand what research is about”.
- Such views are even more frequently directed to the research staff themselves, however, and researchers are given the impression that choosing to go on such courses is:

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<sup>51</sup> In a formal response, the Royal Geographical Society argues that the RCI has failed through lack of proper funding. The University of Leeds suggests that while the RCI and Concordat "...help to alleviate some of the problems associated with the preponderance of fixed-term research staff, they do not help to solve them". Sir Gareth Roberts, in the Roberts Review, says the RCI "...has led most universities to review and to some extent improve their procedures and their pattern of employment of CRS".

“Time wasting” and “That is not what I pay you for”.

97. There is a need to overcome a number of misconceptions. First, more work needs to be done to convince the research side of the institution that staff development is not only an obligation but also of benefit to the institution and its functions. This will be partly addressed through work on management development with the PIs themselves.
98. Second, and perhaps more problematic, is the need to create and demonstrate proper value to the researchers. There is clear agreement among those we spoke to, from all faculties, about where proximate responsibility lies:

“My career is my responsibility” (nods from all round the table).

This is very positive, because it addresses organisational thinker Charles Handy’s message that one can’t wait for ‘them’ to do something about your career. But if the researchers are not impressed by what HR has on offer then the nature and relevance of the provision may not yet be sufficiently well developed. Human resources has to engage with the research culture; good marketing means having a decent product.

## Motivation and rewards

99. For motivation, as for career development, we can distinguish between structural (system) factors and local (research) factors. The strongest motivation and rewards come directly from the research culture and process. They are in the form of opportunities to engage in research, which provide a sense of involvement and ownership offered by very few other careers. The rewards emerge through intellectual engagement, recognition, public presentation and acknowledgement, and formal publication, all of which create and sustain a strong sense of personal identity<sup>52</sup>.
100. Early career researchers work in HE institutions but they work for their PIs and they identify themselves with a community that is mostly located outside the institution. We will discuss the motivational aspects of the relationship with the PI, and note the rewards that research provides.
101. In an institutional context, we found that there were few structural aspects of motivation and reward that formed a critical part of the researchers’ assessment of their position. This stems from their lack of identification with the institution. The likelihood is that their next career move, particularly if it is to a permanent position, will be to another place. Fixed salary scales, lack of performance pay or other incentives for their grades, and the absence of promotion within a contract make institutional motivation irrelevant.

## Pay

102. CSLPE reviews the literature relating to academic pay and the conclusions drawn by observers about the potential effects on recruitment of relative pay levels<sup>53</sup>. There is at present no clear evidence that ‘low’ pay is a deterrent to entry to a research position or that it works against retention of PDRAs<sup>54</sup>. It has certainly been raised as an issue in a number of reports, including the Roberts Review, the National Institute of Economic and Social Research (NIESR) work for the DfES<sup>55</sup>, and a significant number of studies discussed by CSLPE have argued that salary levels are likely to have a deterrent effect.
103. Early career researchers may indeed suffer from relatively poor pay, although those who stay on to become professors could see later compensation. The effect over a profile of lifetime earnings is complex, as CSLPE shows. Differentials against other sectors are greater in the early career stages but the incremental scales provide a better than average rise over the career track. However, while it may be widely argued that erosion in pay differentials could be a major factor for

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<sup>52</sup> This is ably discussed and illustrated by Hockey (op cit).

<sup>53</sup> Oliver, L. (2005) Rewards: The Issue of Pay. *CSLPE Working Paper 2005-4*. Available at: [www.law.leeds.ac.uk/cslpe](http://www.law.leeds.ac.uk/cslpe). See Annex 1 in this report.

<sup>54</sup> Researchers in some fields might be less sanguine about their ‘low’ pay. Ecology research is certainly better paid than many jobs in the environment industry, let alone in conservation. Social science researchers appear to be at least as well paid as many BBC researchers. Career tracks with significantly higher pay do not usually include the opportunity to engage solely in research.

<sup>55</sup> Metcalfe, H., Rolfe, H., Stevens, P., and Weale, M. (2004) *Recruitment and Retention of Academic Staff in Higher Education*. Unpublished report. NIESR/DfES.

the academic sector<sup>56</sup>, CSLPE concludes that it is not yet practical to determine the precise point at which low pay 'bites' – that is, the point at which pay begins to impact recruitment or retention.

104. Pay supplements have been introduced to address the perception of poor pay and the effect this might have on recruitment, but CSLPE notes that these supplements have been targeted primarily at permanent posts. For example, there are 'golden hellos' for teaching posts of over 12 months tenure and endowments for research professors. In some specific disciplines where staff recruitment problems are generic there have been salary increases for post-doctoral research staff.
105. The Research Careers Initiative report drew attention to Research Council willingness to provide funding at salary points above base, but reported that applicants seemed unaware of this provision. Furthermore, the RCI report concluded that many research projects did not require – and hence would not justify – the advanced skills of more costly researchers.
106. In interviews during the site visits, Evidence/HEPU asked about pay, but in general 'low' pay was not identified as a problem that was sufficient to deter researchers from continuing their career in HE. The individual researchers often confirmed that they had been aware of the pay relativities when they became researchers, indeed when they became postgraduate students.
107. Some researchers agreed that they were likely to improve their salaries, sometimes significantly, by moving to other jobs. This was particularly true for those – such as engineers and biochemists - for whom there was a parallel career in the private sector. But there were also demotivational aspects of such a move, particularly the change in culture, that made it unattractive. As one electrical engineer said:
- "I work with people in industry, but if I leave here I would go and do something else rather than do industrial research. The conditions just aren't what I want to work in".

## **Counselling, review and the role of the principal investigator**

108. The key agent in counselling the early career researcher on their progress and potential is the PI - the patron or 'godfather' - for whom they work. This is the critical developmental relationship, and it is absolutely make or break. Whatever institutional review process is put in place can be set at naught if it does not have the endorsement of the PI. The central role of the PI is considered in detail by CSLPE<sup>57</sup> and the view summarised there was reinforced during interviews at Evidence/HEPU site visits.
109. Many universities have established a system for formal, usually annual, appraisal for all staff including early career researchers. In practice, many researchers told us either that they had never had such a review or that they were unaware of the system:
- "People don't take it seriously here. I started to prepare for mine but the others told me not to bother".
- "They talked about it when I arrived but they never acted on it".
110. CSLPE's review notes that the lack of firm implementation of annual reviews for fixed-term staff will undermine the institutional strategic plans and training provision. An annual review is *the* forum in which career development and training programmes can be considered and staff can be directed towards the institutional provision most relevant to their situation. If annual reviews remain optional then the individual may remain ignorant or unmotivated.
111. Where appraisal does take place, the Evidence/HEPU visits suggested that it frequently depends on the PI. This is not always the case, and some institutions explicitly prohibit such an arrangement. However, since the PI is obviously in a strong position to judge what has been done and what can be expected, it is sometimes the case that no other member of staff is involved. This seems unsatisfactory, given the PI's subjective position, and widely-used HR approaches to appraisal outside the research context may be the wrong model here. There is surely room for the

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<sup>56</sup> Enders, J. (2000) 'Academic Staff in Europe: Changing Employment and Conditions'. In Tight, M. (ed) (2000), *Academic Work and Life*. London: Elsevier. Enders also suggests that similar erosion has occurred across Europe.

<sup>57</sup> Oliver, L. and Ackers, H. L. (2005) Fixed Term Positions in the Academic Career Trajectory. *CSLPE Working Paper 2005-3*. Available at: [www.law.leeds.ac.uk/cslpe](http://www.law.leeds.ac.uk/cslpe). See Annex 1 of this report.

general introduction of some more sophisticated system of local management that ensures that a senior member of staff is always available to ensure appraisal occurs, that the process is satisfactory and that the appraisee has a second point of contact.

112. More review and development occurs informally and continuously within the research group. Because this is an embedded part of the research process it is seen as more real and relevant than institutional processes, and this is where leadership and independence can emerge.
113. The PI-as-patron exerts continuous influence on the future of their research staff. They can provide opportunities for work, presentations and publication and they can equally withhold them. Their support is required not only to acquire future funds but for job references, and for being aware of those jobs before they are advertised. They can encourage and they can destroy. The researcher's dependency is almost complete if they wish to be part of this culture to which the PI is effectively a gatekeeper.
114. We were told of the ways in which an effective patron can identify and then nurture research talent:
- “Really good people start to change the research objectives; they identify something they want to follow and begin to work on that alongside the rest of the project.”
- At this stage the patron needs to give the talented researcher their head, give them room to develop. But, as was also pointed out, this may create a problem. The researcher who flies the nest will be next year's competitor for research funding and prestige.
115. The PI-as-grant-holder has only one objective and that is to deliver the maximum value for the funds available. The value is not to the funding stakeholder, except indirectly, but to the research programme that the PI controls and of which the project is a part. On this is promotion and success dependent. The researcher is the willing tool, the pair of hands that performs the research. Anything else is secondary and peripheral.
116. The PI is particularly focussed on research outcomes in the final stages of any project, when success may be in the balance and the risk of failure may be most apparent. It is at this stage that the PI is asked to provide critical counselling to the early career researcher on their future employment. The conflict here should be obvious, and it is a conflict that is rarely resolved to mutual satisfaction.
117. Some institutions have, for these reasons, identified the PIs as the key staff group to work with if they are to elicit any real change in the career development of research staff. The PIs need to be encouraged to become more effective and professional managers, a role for which they currently have little training apart from their own experiences. They also need to accept that their professional responsibilities lie not only with the research culture but also, as employers, with the individuals who work for them.

**RECOMMENDATION:** Institutional strategies are changing. Benchmarks are needed for current monitoring to discern the extent to which these changes produce effective outcomes.

**RECOMMENDATION:** A two-pronged HR focus - that works on management development for PIs as well as on the development of early career researchers - should be adopted across the system.

**RECOMMENDATION:** It is unacceptable for appraisal to be carried out solely by the PI, particularly in the latter stages of any contract. An independent, senior member of staff should always be available as a co-mentor.

## Recruitment and transition to academic posts

118. When we asked senior management and departmental heads about the supply of competent, high quality people to fill the first tier of academic posts, we were again told that, as for early career research posts, there was no lack of supply of suitable candidates (with the specific disciplinary exceptions we have identified before).
119. This finding is similar to that described by HEFCE (in an issues paper October 2002/43<sup>58</sup>), when investigating how many academic staff need to be recruited over the next 10 years. The Funding Council commented that:
- “Overall, current recruitment rates are sufficient to maintain current staff numbers. However, this varies by subject.”
- The key route of consequence to the research base is that of the future academic in research as a ‘career starter’. The Roberts Review identified three career trajectories, which are also described in Figure 1.
120. There was no evidence of any decline in quality of appointments. However, quality in this context was qualified: it means research quality. It is quite clear that competency and appointment is very heavily weighted towards the research agenda. Staff have been appointed who may have some serious challenge in proving to be effective teachers, either because of their social or linguistic profile.
121. In site visits, we were told that there has been an increase in academic recruitment from overseas, at this level as for researchers. In scanning strategic documents, however, we found that the extent to which HR policies in HE institutions are responsive to the internationalisation of the academic labour market is varied. Some consideration was given to overall supply and some also to excellence or quality.
122. One leading research-intensive university identified the importance of being able to attract “the very best academics worldwide”. Another London-based institution reported that “in some areas it is becoming increasingly difficult to recruit UK staff”, referring to the impact of attractive alternatives both abroad and from other professions in London. Some institutions made no explicit mention of overseas recruitment. Indeed, one leading Russell Group university defined itself as drawing on local and national labour.
123. No institutions identified any explicit plans to augment flows from abroad or specific measures to retain these sections of their workforce. In general, the strategies might suggest an air of complacency – or ignorance – in this regard. Interestingly, one institution had set itself a target of recruiting 10% of new senior academic appointments with international experience<sup>59</sup> and it was clear that more peripheral institutions had greater difficulties in attracting foreign staff.
124. Some caveats about overseas entrants as recruits to the permanent academic staff base were entered by senior staff.
- “Their research is excellent, and we can develop their teaching. But there are cultural issues which are less easily met”.
- The reference here is to the swathe of ‘other activities’ in which many permanent academic staff informally engage (having transformed from research posts), often without remuneration. They are part of the traditional interface between the university and its wider community; for example, academic staff are members of liaison committees with research users and local business, become governors at schools, and contribute to outreach programmes. There is some evidence that some non-UK staff may, in certain circumstances, find it quite difficult to be absorbed into this network. The loss of the activity could, if not absorbed elsewhere, have a longer term effect on the institution’s local and regional role.

<sup>58</sup> [http://www.hefce.ac.uk/pubs/hefce/2002/02\\_43.htm](http://www.hefce.ac.uk/pubs/hefce/2002/02_43.htm)

<sup>59</sup> In some countries and disciplines, the ‘expectation’ of mobility in research careers is greater than in others. Many people regard mobility as an academic ‘proving ground’ and a way to achieve international experience. Often by spending a year or two completing post-doctoral positions abroad, researchers feel they are more likely to secure a permanent position in their home country (see Ackers, H.L. (ed., forthcoming, 2005) *Gender, Mobility and Academic Career Progression*. Camberley: Edward Elgar).

## Stakeholder roles

125. Principal stakeholders, particularly those who are funding the research process, have an important role that deserves some further examination. The dual focus - on the research function and on researcher development - applies in their case as elsewhere.
126. For the research funding agencies, particularly the Research Councils, the primary objective of research grant funding is to buy research. Applications are made competitively and awards are made for those projects deemed to have a strong likelihood of delivering sufficient research of significant excellence. The researcher is only of particular interest for the project in terms of availability and cost, although the Research Councils acknowledge a longer-term interest in a healthy supply of able people.
127. The Research Councils have a Postgraduate Training Group. They do not have a committee with any specific remit to oversee the early career development of researchers. This function falls to the Research Funders' Forum's Research Careers Committee, chaired by Sir Gareth Roberts<sup>60</sup>. For the Research Councils, therefore, the administrative focus with respect to individual research grants is on research process and outcome. In regard to the researchers, the Councils support the professional HR function at the centre of the HEIs.
128. This split focus can be misinterpreted at the institutional end. The grant holders - the PIs - see the funding interest as wholly divorced from staff development. The 'only thing that matters' is getting the research done. PIs can and do use this argument in negotiation with their own heads of department. There is an assumption that if the Research Councils are not interested then it is not important.
129. This relationship between funding stakeholder and grant-holder misses an opportunity to have a significant influence on research career development. In the preceding sections we have noted repeatedly the extent to which the issue of career development cannot be sensibly divorced from the research process.
130. A significant step forward would be made if the PIs' research plan were functionally linked to a researcher development plan. This need not be an onerous requirement, but once it was clear that this issue was overtly on the Research Councils' agenda the management focus of the PIs would rapidly include it.
131. While no compulsion can be placed on any agency, it seems reasonable to suppose that good practice would rapidly spread, as it has done for postgraduate funding in response to action taken by the Wellcome Foundation.

**RECOMMENDATION:** The Research Councils and other grant awarding bodies should, at the point of project initiation, request a short (single paragraph) career development plan from principal investigators appropriate to the named staff employed on the project. (It would better linked to the award stage but this is unfeasible if the PDRA has yet to be recruited.) At the end of the grant, the RCs should ask for confirmation of implementation from the institution and from the researcher.

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<sup>60</sup> [http://www.ost.gov.uk/research/research\\_careers/index.html](http://www.ost.gov.uk/research/research_careers/index.html)

The Research Careers Committee terms of reference are to advise and inform the Funders' Forum and other interested parties on issues relating to research careers, including contract research staff, research students and new lecturing staff within higher education

## ANNEX 1 – CSLPE documents

Some of these documents contain extensive supplementary information. The full text has been made available as a series of downloads to avoid editing out the contextual material from this summary document. Report downloads – and the related appendices – can be accessed from the CSLPE website at: [www.law.leeds.ac.uk/cslpe](http://www.law.leeds.ac.uk/cslpe)

### **Academic Career Trajectories: Identifying the ‘Early Stage’ in Research Careers**

Louise Ackers

CSLPE Working Paper 2005-1

### **Attracting and Retaining Junior Researchers in English HEIs: Is there a Problem?**

Louise Ackers and Bryony Gill

CSLPE Working Paper 2005-2

### **Fixed-term Positions in the Academic Career Trajectory**

Liz Oliver and Louise Ackers

CSLPE Working Paper 2005-3

### **Rewards: The Issue of Pay**

Liz Oliver

CSLPE Working Paper 2005-4

Related Appendices (by Louise Ackers):

1. **The Fixed-term Employees (Prevention of Less Favourable Treatment) Regulations 2002: A Summary**
2. **The European Researchers’ Charter and Code of Conduct for the Recruitment of Researchers**
3. **Career Management of Contract Research Staff: the UK Concordat and the Research Careers Initiative**
4. **Fixed-term Contracts: A Gender Issue?**

CSLPE staff also carried out a series of visits to stakeholder organisations. These interviews have fed into the four papers listed above. CSLPE would like to thank those individuals who gave their time during those visits:

<b>Name</b>	<b>Organisation</b>
Phil Green	Wellcome Trust
Caroline Fox	ATHENA
Jan Peters	Royal Society
Kay Holford	Dept of Trade and Industry (DTI) EU R&D Issues
Stephen Court	Association of University Teachers (AUT)
Sigi Gruber	EC
Anne McFarlane	DTI/OST
Janet Metcalf	UK GRAD
Peter Cotgreave	Save British Science Campaign

CSLPE would like to give special thanks to John Thompson and Lisa Readdy from HEFCE’s Analytical Services Group for supplying HESA data, and to Jan Anderson and Caroline Fox for preparing and giving access to ASSET data.

## ANNEX 2 – Evidence/HEPU site visits

Some of these documents contain extensive supplementary information. The full text has been made available as a download to avoid editing out this contextual material from this summary document. These can be accessed from the Evidence website at: [www.evidence.co.uk](http://www.evidence.co.uk)

We visited the following institutions and specific faculties within these institutions, some on more than one occasion, between October 2004 and January 2005.

- Aston University
- University of Bristol
- University of East Anglia
- Lancaster University
- University of Leeds
- University of Leicester
- London School of Economics & Political Science
- Manchester Metropolitan University
- University of Oxford
- University of Sheffield
- University of Sunderland

We are extremely grateful for the kindness shown by academic and administrative staff and by the researchers we met, and for the time they gave to support the study.

The standard procedure for each site was to meet with three groups of people and to follow a pre-set and piloted interview pro-forma, which had been sent to the interviewees beforehand. The main staff groups were:

- Senior management team, including some of: the pro-vice chancellors for research and for staff, the directors of human resources and of research services, or their equivalents.
- Heads of academic departments and experienced principal investigators.
- Early career researchers.

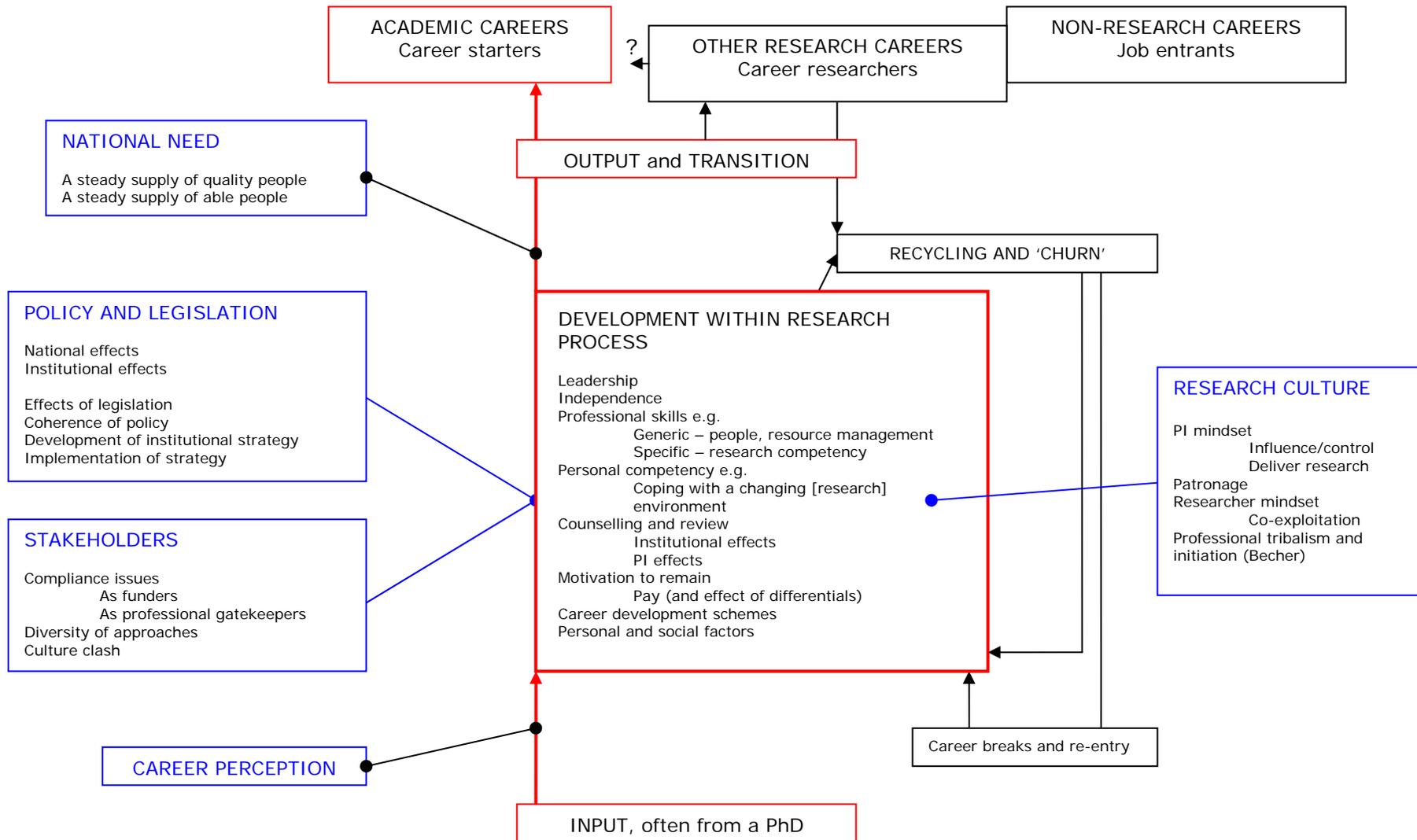
We chose to concentrate on a stated set of disciplines, for comparability between sites, but we accepted that the nature of the institutions and the availability of staff would mean that these preferences could not always be met. The disciplines were:

- Bio-medical sciences, including both Molecular Biology and Medicine
- Engineering, either Civil or Mechanical
- Law and/or Sociology
- Philosophy or English

The reports have been anonymised as far as we could while allowing sense to be preserved. They follow broadly the same sequence and format.

**Figure 1 (extended version) Early career development of researchers**

Supply chain to the academic research base is in red



## ANNEX 3 – ARMA survey

### The implementation of permanent contracts for research staff

1. The Association of Research Managers & Administrators (ARMA) surveyed its members on the current status of policy regarding the employment of early career researchers. The survey shows that pre-1992 universities have made progress towards issuing permanent contracts. The most likely position that will be reached by 2006 is for researchers' performance and future commitments to be reviewed as they approach their four-year anniversary, with a view to permanency at that point. Few institutions will offer all-permanent contracts from the outset, although individual research groups may choose to do so.

### Background

2. The *Fixed-Term Employees Regulations 2002* came into force on 1 October 2002 and affect all staff with fixed-term contracts who will complete four (or more) years continuous service by 10 July 2006. From that date, after four years of service on two or more contracts, an employment contract automatically becomes indefinite unless a further fixed-term can be 'objectively' justified by the employer. Service prior to 10 July 2002 will not count towards this period (AUT, undated<sup>61</sup>; Bates, 2003<sup>62</sup>).
3. Until there is sufficient case law on the matter, it is not clear what an 'objective justification' may be (Nimmo, 2003<sup>63</sup>). However, it is unlikely to be sufficient to argue only that the employee is working on a finite project with finite funding. The Joint Negotiating Committee for Higher Education Staff guidelines (UCEA, 2002<sup>64</sup>) offer the following as an objective justification:  
"...where there is no reasonably foreseeable prospect of short-term funding being renewed nor other external or internal funding being available or becoming available. Where the short-term funding has already been renewed, continuing use of the fixed-term contract would need to be justified by objective reasons".
4. For many contract research staff (CRS), there is often a prospect of additional funding becoming available, and many CRS hold this status for four years or longer. As a group, they will be greatly affected by the changing legislation, and institutions should be preparing for this. With two years to go before the deadline, it seemed an opportune moment to see what progress universities had made towards implementing permanent contracts.

### Approach

5. A question was sent to the rag@jiscmail.ac.uk list in July and again in August 2004. In November, individuals at specific institutions which had not responded were targeted, with a view to ensuring a wider spread of responses.
6. The question was informally phrased and invited anecdotal responses. Whilst some people passed it on to HR departments for an 'official' response, many were personal. Accordingly, the responses have been anonymised, although a list of responding institutions is appended.

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<sup>61</sup> AUT (undated) Pay and conditions: fixed term regulations

<http://www.aut.org.uk/index.cfm?articleid=248>

<sup>62</sup> Bates, J. (2003) Contract research staff and fixed term legislation

[http://www.arma.ac.uk/news/spring\\_conferences/downloads/03bates.pdf](http://www.arma.ac.uk/news/spring_conferences/downloads/03bates.pdf)

<sup>63</sup> Nimmo, K. (2003) Spring Workshop *Report 2003 - Workshop B: Contract research staff and fixed term contracts legislation* (Jonathan Bates, NERC)

[http://www.arma.ac.uk/news/spring\\_conferences/downloads/sc03wksB.pdf](http://www.arma.ac.uk/news/spring_conferences/downloads/sc03wksB.pdf)

<sup>64</sup> UCEA (2002) Joint Negotiating Committee for Higher Education Staff Fixed-Term and Casual Employment Guidance for Higher Education Institutions

[http://www.ucea.ac.uk/ft&cguides\\_aug2002.html](http://www.ucea.ac.uk/ft&cguides_aug2002.html)

## Respondents and responses

7. Thirty-two responses were received, of which 28 were in direct response to the question, covering 26 institutions. Two responses were received from two institutions, in each case offering both a central and a departmental view on the situation. This number of responses is in the normal range for queries to the email list: although it has over 1,000 members, many members may assume that someone else from their institution will respond, or may feel that they cannot speak 'officially' on behalf of their institution. Seeking anecdotal responses was intended to encourage them to respond, but met with limited success. Equally, of course, the matter is not one with which all list members are familiar; some will be keen to learn from the responses of others, but for many, the matter is not one they have to deal with in their particular roles.
8. The great majority of responses came from English institutions, with only two from Scotland and none from Wales and Northern Ireland. Both Scottish responses were from Russell Group institutions. In England, there were responses from 14 pre-1992 and ten post-1992 universities; the pre-1992 institutions included five Russell Group members and two 1994 group members.
9. Respondents were firstly invited to rate their institution's progress against a six point descriptive scale, and then asked to provide additional comments on processes and discussions at their institutions.

Scale:

1. My institution hasn't got anywhere. In fact it's trying to reduce the chances of having to issue such contracts.
2. My institution acknowledges that change will have to happen, but doesn't seem to have taken any action towards it yet.
3. My institution has been engaged in discussion and consultation, and has made decisions about how it is going to do this, but to date no contracts have been awarded.
4. My institution has issued its first new permanent contracts to researchers, but many researchers who are likely to reach four years' service by July 2006 are still on fixed-term contracts.
5. All our researchers either have, or are in the process of being issued, permanent contracts.
6. All our researchers have permanent contracts and always have done.

Scale point	Pre 92		Post 92		Total
	Institution wide	Individual department(s)	Institution wide	Individual department(s)	
1					0
1-2	2		1		5
2	1		4		5
2-3	2		1		3
3	1	1	3		5
3-4	1				1
4	4		1	1	6
4-5	1	1		1	3
5	1				1
6		1			1
	<b>15</b>	<b>3</b>	<b>10</b>	<b>2</b>	<b>30</b>

N.B. Totals do not always add up, as in some cases an institution and a department thereof may be rated separately.

10. The responses suggest that post-1992 institutions, with smaller numbers of CRS – both in absolute terms and in terms of the number likely to achieve four years' service – have not generally made significant progress in addressing the issue of permanence for this group of staff (although it is likely that they have considered moving fixed-term teaching staff to open-ended contracts).
11. Post-1992 institutions seem more likely to have made progress towards issuing permanent contracts for researchers, with the most common position being that *some* researchers have now

received such contracts, but others who are expected to achieve four years' service by July 2006, have not.

### **Reasons for not having progressed further**

12. Many institutions have not made significant progress with this matter, and it is clear that full implementation requires considerable time input from HR departments, but also from other departments, both academic and support. In particular, systems needing creating to monitor income flows for staff on permanent contracts, and for dealing with redundancy payments, should they become necessary (not least for determining the level of contribution made by departments, faculties and institutional central funding towards redundancy payments). Negotiations with trade unions have also required considerable time input at some institutions.
13. In one institution, a decision in principle to award permanent contracts has been delayed by a requirement to receive written confirmation from funders that holders of such contracts are eligible for funding. Whilst UK funders have been helpful in providing this confirmation, it has not yet been received from the European Commission.

### **Reasons for pressing ahead**

14. One (Russell Group) institution realised that early implementation of permanent contracts could be used:

"...positively, in trying to attract staff" (compare to UCEA, 2002, section 7 "there are benefits to the institution and the long-term career development of staff in transferring them, as appropriate, to indefinite contracts").

Another Russell Group institution plans to move to issuing researchers with indefinite contracts on appointment (or on renewal, for existing staff). Many institutions have taken a somewhat 'piecemeal' approach, with the first permanent contracts for researchers going to those with the longest track record of attracting continuing research funds, or to progressing between grants; these criteria could apply to individuals or to research groups.

15. Often such approaches appear to be led by successful research groups, rather than by HR departments: there is some evidence of social science research centres in particular, where there is an established prospect of being a 'career contract researcher', taking a lead either in encouraging HR departments to develop the necessary policies, or being willing to 'take a gamble' on individuals and issue them with permanent contracts.
16. However, in areas where the idea of a 'career contract researcher' is not the norm, and CRS are seen as higher level trainees rather than full members of the research workforce, there has been some resistance to offering open-ended contracts, perhaps allied with a fear that these will reduce the:

"...turnover of people, and hence [the] discipline will ossify".

### **Managing performance and development**

17. Historically, institutions did not always operate probation schemes for CRS, or spend time on performance management, or in developing individuals (Bates, 2003). Those institutions which have moved furthest ahead have addressed these issues. For some institutions or departments where implementation has been partial (i.e. point 4 on the scale), this has partly been to do with timings:

"We currently believe that people have made the transition to being largely independent researchers after eight years, and everyone with eight years' service was awarded a permanent contract in the first wave. We are now working with those in the four-to-eight year window to look at development needs and mutual expectations, until that transition is completed."

In other cases, new probation schemes have been introduced, followed by systems of annual review, particularly at the three-year point.

## Conclusions

18. Although the number of responses constitutes too small a sample to make significant generalisations, it seems likely that pre-1992 universities are by and large ahead of post-1992 institutions in implementing permanent contracts for research staff.
19. With more and longer-term research staff, the pre-1992 institutions have a bigger task to deal with before July 2006. It is encouraging to see that a number have made significant progress towards issuing permanent contracts.
20. It seems that the most likely position that will be reached by 2006 is for researchers' performance and future commitments to be reviewed as they approach their four-year anniversary, with a view to permanency at that point. Few institutions will offer all-permanent contracts from the outset, although individual research groups may choose to do so.

## Responding institutions

### England

- Bournemouth University
- University of Bradford
- University of Cambridge
- De Montfort University
- University of Leeds
- University of Leicester
- University of Lincoln
- Liverpool John Moores University
- Birkbeck College, London
- Institute of Education, University of London
- London School of Economics & Political Science
- Queen Mary, University of London
- Royal Holloway, University of London
- University College London
- London Metropolitan University
- Loughborough University
- Manchester Metropolitan University
- Northumbria University
- The Open University
- University of Oxford
- University of Plymouth
- University of Sunderland
- University of Sussex
- University of Teesside

### Scotland

- University of Edinburgh
- University of Glasgow