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Science and Technology
Committee

**Research Assessment
Exercise:
a re-assessment**

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Report, together with formal minutes, oral and written evidence

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Summary

We published a Report on the Research Assessment Exercise (RAE) in April 2002 and decided to conduct a follow-up inquiry in the light of Sir Gareth Roberts's review of the RAE and the subsequent decisions made by the Higher Education Funding Councils, announced in February 2004, for the next RAE to be held in 2008. We conclude that many of the revisions to the RAE are positive, in particular the introduction of a quality profile for each academic department to replace the 7-point scale, which will be fairer and will help, although not eliminate, "game-playing" by universities. Also, the new panel and sub-panel structure should improve consistency between panels and the assessment of interdisciplinary research. We believe that the Funding Councils are wrong to have shied away from more radical change. We advocate different assessment routes as a means of reducing the bureaucratic burden on higher education institutions and the workload of panels. In many disciplines external research income is a good indicator of research quality; in other cases there will be appropriate metrics. These should increasingly be used to replace the deliberations of panels. Concerns have been expressed that it may not be possible for the Funding Bodies to maintain the confidentiality of assessments of individual researchers in the face of court action. We conclude that the Funding Bodies should pre-empt any legal challenge and publish these data. We believe this will improve transparency and would help to highlight the important non-research activities of academics.

There have been calls for the next RAE to be delayed or abandoned. While we would like our recommendations to be implemented as soon as possible, we believe that quality-related research funding is necessary and that it should be based on up to date data. The next RAE should go ahead in 2008 but no time should be wasted in developing more radical solutions for the scheduled RAE in 2014. Another concern is the Higher Education Funding Council for England's delay in publishing details of how the quality profile will be used to calculate funding. At present, it is asking higher education institutions to play the game without a rule book. We believe that the funding formula applied should not further increase the selectivity of research funding.

The RAE cannot be viewed in isolation from other areas of higher education funding policy. A problem has been that the RAE, conceived as a mechanism for directing the Funding Councils' research funds to the best institutions, has become too important and has unbalanced universities' priorities. We argue that financial incentives to improve quality in all areas of higher education should be introduced.

It is also important to recognise that the next RAE will take place against the background of other fundamental changes to higher education, including the introduction of a market through the charging of variable fees. The RAE may also need to be reviewed in the light of the effects of those wider changes, not least with respect to the viability of university departments in core subjects, potential further department closures and the geographical pattern of such closures. The operation of the RAE has been detrimental to the provision of science and engineering in the UK. There is no evidence that the changes that are proposed will not continue to compromise this provision.

1 Introduction

1. In our second Report of this Parliament, published in April 2002, we considered the Research Assessment Exercise (RAE), the periodic mechanism on which the Higher Education Funding Councils base the quantum of the research element of their grants to higher education institutions (HEIs).¹ We concluded that while the RAE had driven up research standards, there were problems with the process, the funding decisions based on the results and its negative impact on other areas of HEIs' activities. At the instigation of the four Higher Education Funding Councils, a review of research assessment was conducted by Sir Gareth Roberts, President of Wolfson College, Oxford. This led to significant changes being announced by the Higher Education Funding Councils (the "Funding Bodies") on 11 February 2004.² Further details were announced in July 2004.³ We decided to revisit the subject to determine whether these revisions were likely to address the problems we had identified.⁴

2. The focus of this Report is on the mechanism of the RAE. However, a key conclusion of our initial Report was the need to consider the RAE and the funding decisions based on it in the wider context of higher education funding. We will therefore comment on the wider funding issues facing higher education. While the RAE is a national activity (undertaken by the Higher Education Funding Council for England (HEFCE) on behalf of all the Funding Bodies), the funding of higher education is devolved. Our Report will concentrate on the situation in England.

3. We held two evidence sessions in this inquiry. On 19 May 2004 we took evidence from Professor Sir Gareth Roberts; Lord May of Oxford, President of the Royal Society; Professor Ivor Crewe, Vice-Chancellor of University of Essex and Professor Adrian Smith, Principal of Queen Mary, University of London, representing Universities UK; and Sir Howard Newby and Mr Rama Thirunamachandran, respectively, Chief Executive and Director of Research and Knowledge Transfer at the Higher Education Funding Council for England. On 7 June 2004, we sought a more grass-roots view, taking evidence from Ms Natalie Fenton, Senior Lecturer in Communications & Media Studies, at Loughborough University, Professor Ian Haines, Director of the Graduate School at London Metropolitan University, Professor Richard Joyner, Dean of Research at Nottingham Trent University, and Dr Steve Wharton, a Senior Lecturer at the University of Bath. These witnesses have affiliations to other organisations but they appeared in a personal capacity. We are grateful to all those who gave evidence to the inquiry. We are also indebted to our Specialist Adviser, Professor Michael Elves, formerly of GlaxoWellcome.

1 Second Report from the Science and Technology Committee, Session 2001-02, *The Research Assessment Exercise*, HC 507

2 Higher Education Funding Council for England, Scottish Higher Education Funding Council, Higher Education Funding Council for Wales, Department for Employment and Learning Northern Ireland, *Initial decisions by the UK funding bodies*, February 2004, RAE 01/2004. This will hereafter be referred to as the "initial decisions".

3 Higher Education Funding Council for England, Scottish Higher Education Funding Council, Higher Education Funding Council for Wales, Department for Employment and Learning Northern Ireland, Units of assessment and recruitment of panel members, July 2004, RAE 03/2004

4 Press Notice No. 19 of Session 2003-04, dated 11 February 2004

2 Background

Dual support system

4. Government funding for UK higher education research is channelled through a system of dual support. Project funding for scientific research comes from the Office of Science and Technology's Science Budget, through the six grant-awarding Research Councils. Their combined budget for 2003–04 was just under £1.9 billion, of which around 40% funds specific research projects within universities. Projects are also funded by other Government Departments, industry, charities and through the EU Framework Programmes.

The Funding Bodies

5. The second leg of the system – to provide core support for staff and most infrastructure and equipment – is provided by the Higher Education Funding Councils (“the Funding Bodies”), from the budgets of the Department for Education and Skills (DfES) and the devolved administrations. The Higher Education Funding Council for England (HEFCE) has a budget of £5,993 million for the 2004–05 academic year, with £3,826 million for teaching, £1,081 million for research, £486 million for special funding and £584 million for earmarked capital funding. The funds for research and teaching are distributed via a block grant, which an HEI is free to allocate as it wishes. The Funding Bodies’ research funding has been intended to provide for the research infrastructure in HEIs, to cover a significant proportion of the indirect overhead costs of research and to contribute to the fixed costs of research (staff, equipment, libraries etc). Research Council funding has been intended to provide for direct project costs and to contribute to indirect project costs. Currently, the Research Councils will pay 46% of the direct staff costs funded on a research grant. The Government has recently announced that the Research Councils will move to a funding model in which they pay the full economic costs of the research they fund.⁵

The RAE

6. Most of HEFCE’s research budget is allocated as quality-related research (QR) funding. Research quality is evaluated by the Research Assessment Exercise (RAE). The RAE was undertaken first in 1986, and subsequently in 1989, 1992, 1996 and 2001. It was changed substantially in 1992 with the creation of the new universities and the Higher Education Funding Councils (formed from the merger of the Polytechnics and Colleges Funding Council and the University Grants Committee). The RAE was introduced as mechanism to direct funding at the best researchers in a transparent manner. Previously, the University Grants Committee used subject-based committees as a mechanism for allocating research funds selectively.

7. In RAE 2001 the panels scored each departmental submission on a 7-point scale, the lowest being 1 and the highest 5* (see Table 1 below), based on the amount of research being conducted of a national or international standard.

⁵ HM Treasury, Science & Innovation Investment Framework 2004 – 2014, July 2004. It is likely that the Research Councils fund will need to pay in excess of 60% of the direct staff costs in order to meet the full economic costs.

Table 1: The RAE ratings system

Rating	Description
5* (5 star)	Levels of international excellence in more than half of the research activity submitted and attainable levels of national excellence in the remainder.
5	Levels of international excellence in up to half of the research activity submitted and attainable levels of national excellence in virtually all of the remainder.
4	Levels of national excellence in virtually all of the research activity submitted, showing some evidence of international excellence.
3a	Levels of national excellence in over two-thirds of the research activity submitted, possibly showing evidence of international excellence.
3b	Levels of national excellence in more than half of the research activity submitted.
2	Levels of national excellence in up to half of the research activity submitted.
1	Levels of national excellence in virtually none of the research activity submitted.

8. There was no restriction on the proportion or number of academic staff submitted as research active, although these data were published. Submissions were designated A–F depending on the proportion of staff entered. A = 95–100% staff submitted; B = 80–94.9%; C = 60–79.9%; D = 40–59.9%; E = 20–39.9%; and F = below 20%.

The Committee's initial inquiry

9. Our initial inquiry, conducted in 2002 in the aftermath of the announcement of the results of RAE 2001, concluded that there had been a marked improvement in universities' research performance, although there had been some gamesmanship: some departments had been assessed on only a proportion of their researchers and had juggled researchers and departmental boundaries to optimise their returns. Despite this, we believed that the RAE had had positive effects: it had stimulated universities into managing their research and had ensured that funds were targeted at areas of research excellence. Nevertheless, we argued that the RAE in its present form had had its day. We proposed a funding model which combined an alternative method of allocating money to the top departments with a reformed RAE and a development fund for new or improving departments.

10. The Funding Bodies employ a funding formula to calculate the QR grant to universities. The increase in the number of departments ranked 5 and 5* meant that the budget for 2002–03 was insufficient to fund departments using the funding formulae that had been previously used. Most universities had anticipated that departments of a given grade would be funded at the same level as before, yet this was not possible within the budget provided. In England, the DfES provided an additional £30 million to fund the improvements but this was far short of the extra £206 million required to fund the new ratings on the existing basis. We argued that HEFCE should have anticipated the results of RAE 2001. It should either have ensured that it had sufficient funds to reward the

improvement or at least warned universities that this was unlikely to be the case. We disagreed with its decision to target its limited budget on the highest-performing departments at the expense of those which were developing. We argued that this needed to be addressed in the 2002 Spending Review.

Sir Gareth Roberts's Review

11. Sir Gareth Roberts was invited to lead a review of research assessment in June 2002 to investigate different approaches to the definition and evaluation of research quality, drawing on the lessons both of the 2001 RAE and of other models of research assessment, and advise on the future of research quality evaluation. Sir Gareth's recommendations in his review reflected many of the Committee's concerns. The key features of his proposals were:

- a) A six year review, with mid-term "light touch" monitoring "to highlight significant changes in the volume of activity";
- b) A three-track assessment process;
- c) The introduction of a "quality profile" indicating the quantum of "one star", "two star" and "three star" research in each submission to replace the existing seven-point scale; and
- d) Institutions would have to satisfy certain institutional competences to qualify for assessment, such as their staffing policy, treatment of young researchers and long-term financial planning.⁶

The Funding Bodies' Initial Statement

12. Sir Gareth's Report was issued for consultation in May 2003 with a deadline at the end of November 2003. The result was a Joint Initial Statement from the four Funding Bodies issued in February 2004. The main points announced in that document were:

- a) The next RAE will take place in 2008 with subsequent RAEs following on a six-year cycle;
- b) Eligible research outputs must be published between 1 January 2001 and 31 July 2007 with no more than four outputs for each named researcher;
- c) A single assessment method will be used for all participating HEIs rather than Sir Gareth's three-track approach. Assessment will be conducted by 15–20 main panels, and around 70 sub-panels. There will be no separate assessment of research competences or mid-point monitoring, as advocated by Sir Gareth's review. The assessment process will be designed to ensure that joint submissions are not discouraged. Due weight will be given to applied research assessed against appropriate criteria of excellence; and
- d) Results will be published as a continuously graded quality profile for each submission at the sub-panel level. Quality profiles will be criterion-referenced against clearly defined common standards.

3 Proposals for RAE 2008

Assessment routes

13. A key element of Sir Gareth Roberts's review was that it was time to "move away from a 'one-size-fits-all' assessment, to a model which concentrates assessment effort where the stakes are highest".⁷ The purpose of different assessment routes (or "tracks") was to impose a bureaucratic burden in proportion to the potential rewards. He proposed three routes:

- a) An option of a separate approach for the least research intensive institutions;
- b) Assessment by proxy measures against a threshold standard for the less competitive departments in the remainder of institutions; and
- c) Expert review assessment similar to the old RAE for the most competitive departments.

14. According to the Funding Bodies, Sir Gareth's model was not endorsed by the consultation responses. The Funding Bodies have accordingly retained a single assessment route. Sir Gareth told us that the responses had been evenly split and that HEFCE were looking for a large majority in favour of change but did not get it.⁸ The AUT supports the rejection of Sir Gareth Roberts's tiered system of assessment.⁹ The Biosciences Federation says that there is "concern that in multi-track models it may prove difficult to move from one track to a higher one because of funding differentials....[but] under the alternative models institutions with few expectations of high ratings could opt for a less bureaucratic assessment, and that this would relieve pressure on RAE panels".¹⁰ Support for the principle did come from the British Society of Criminology.¹¹ Sir Howard Newby said he had sympathy with Sir Gareth's assessment routes but he reported "a very strong outcry, from even those institutions which were not strong in research, that they had, if you like, almost an entitlement to be entered for the full RAE, and this was really to do with status rather than money".¹² This was echoed by Professor Richard Joyner: "the idea that the university has to be entered into the RAE to have a spectrum in research at all has acquired a certain macho thing about it, and no vice chancellor is willing to say that they were prepared to accept the other two tracks that Gareth proposed".¹³ We regard this as a poor reason for rejecting the multiple track approach.

15. Natalie Fenton's criticism of the multi-track approach was that it "means that you will get a graded system where you will hugely increase the funding differentials that exist already for research".¹⁴ This anticipates the levels of funding for each track. She may have legitimate concerns here given the highly selective funding policies of HEFCE but this

7 *Review of research assessment*, Report by Sir Gareth Roberts to the UK funding bodies, May 2003, p 2

8 Q 19

9 Ev 48

10 Ev 32

11 Ev 36

12 Q 64

13 Q 91

14 Q 91

should not be seen as a fundamental problem with the three track approach. Steve Wharton told us that the proposed system would have re-established the pre—post-92 divide.¹⁵ To some extent this might have been the case, although some might argue that the three track approach might encourage some of the post-92 universities to pursue distinctive and valuable lines of research, such as those that support local industry, rather than aspire to emulate the basic research activities of the older universities. It should also be appreciated that many post-92 universities boast 5 and 5* departments while many in the older universities continue to underperform. Dr Wharton and Ms Fenton argue that there should be a level of start-up research funding for all departments.¹⁶ It is arguable that the best way of achieving a reasonable level of funding to all departments would be to embrace a multiple track approach.

16. The Funding Bodies should have looked at the quality of the arguments set out in the responses to their consultation and not just the numbers. The move away from the “one size fits all” approach advocated by Sir Gareth Roberts is an important principle which should have been adopted. We consider the Funding Bodies to be unjustifiably conservative in their proposals. We do not see it as HEFCE’s role to protect the sensitivities of universities.

17. We also recommended a three track approach in our earlier Report:¹⁷

- i. Top-rated departments would be exempted from the formal research assessment process if they wish. Instead their Funding Council income would be based on their project funding from Research Councils, charities and other sources. Funding levels would need to reflect the source of funding and the overheads included in that funding. HEFCE might reward the individuals responsible for their department's high rating.
- ii. Other departments could continue to take part in a research assessment process. Funding from the Funding Councils would then be based on a formula relating research quality and volume as at present but departments not reaching a minimum standard of quality would not be funded.
- iii. Departments taking part in the research assessment process could apply for development money through a bidding process and would be assessed by subject panels based upon the RAE units of assessment (UoAs). They would be required to enter subsequent RAEs to provide a benchmark for improvement. Applications would be based on a business plan which should indicate how they intend to achieve a higher research quality rating.

18. This would be combined with a funding stream to encourage research collaboration with external partners. Our system differed in an important respect from Sir Gareth's in that in our system it would be the top-ranked departments that could opt out of the RAE. This is based on the fact that external research income could be used as a more reliable proxy for research quality. It also follows a principle employed by the Government in other

¹⁵ Q 91

¹⁶ Qq 88, 91

¹⁷ HC (2001–2002) 507, para 86

areas of public services in which the bureaucratic burden is minimised for the best performing institutions. Our scheme could easily be applied at an institutional level. Not all disciplines are able to attract the same levels of external research income and this would need to be factored in for any calculation of QR funding.

Panels

Structure and functions

19. For RAE 2001, research was divided into 68 subject areas or Units of Assessment (UoAs), of which 32 could be described as science, medicine or engineering. An assessment panel was recruited to examine research in each of these areas. Panel sizes varied according to discipline; for example, Physics had 11 members and Biological Sciences had 20. Eleven subpanels were set up, all in the clinical subjects. Panels could call in outside expertise if its members felt unqualified. A submitting department could ask for its work to be cross-referred to other relevant panels if it spanned the boundary between UoAs or was interdisciplinary in character.

20. Each submission contained the names of “research active staff” along with up to four research outputs for each person; for example, journal articles, books, book chapters, conference contributions and patents. Panels were expected to make a judgement on a researcher based only on the outputs submitted. They were also able to consider reasons why a researcher had not produced the requisite four outputs.

21. In our earlier Report we expressed a number of reservations about how panel members and chairmen are chosen, and about whether, as academics judging other academics, they are truly objective. We were concerned by the size of the panels and the number of outputs they had to consider. These issues have not been addressed by the Funding Bodies in their proposals.

22. In their Initial Decisions, the Funding Bodies announced that the number of main panels would be cut to 15–20 main panels, whose decisions would be based upon detailed assessment work by around 70 sub-panels. In July 2004, the Funding Bodies announced details of the Units of Assessment.¹⁸ There will be 67 subpanels and 15 main panels.

23. Each sub-panel will cover a discrete subject area or unit of assessment, and will report to a single main panel. The role of a main panel will be:

- a) To give leadership and guidance to a group of sub-panels on their approach to the assessment process, including approving their criteria for assessment and working methods;
- b) To work with the sub-panels during the assessment period to ensure consistent application across the exercise of the overall quality standards, common assessment procedures, and equal opportunities guidance;
- c) To sign off quality profiles for all submissions to the sub-panels, based upon the work and advice of the sub-panels;

¹⁸ The Funding Bodies, *Units of assessment and recruitment of panel members*, RAE 03/2004, July 2004

d) To give advice as requested by the RAE team and funding bodies on aspects of the assessment process, including requests for additional specialist advice; and

e) To produce a final report on the state of research in the disciplines covered by the sub-panels.

24. Each main panel will cover a group of sub-panels. Sub-panels will:

a) Produce draft criteria for assessment and working methods for approval by the main panel;

b) Work within the agreed criteria and in collaboration with the main panel, to produce draft quality profiles (to be signed off by the main panel) and associated brief feedback for all submissions made to them; and

c) Advise the main panel and RAE team on cross-referrals to other sub-panels of submissions or cited research, and on the need for additional specialist advice.

25. These proposals have received a mixed reception. Research Councils UK “support the principle of setting up a system of panels and sub-panels” although Universities UK has “concerns about the complexity of the proposed system and the potential for it to be time-consuming and burdensome” and the Association of the British Pharmaceutical Industry sees the two tier structure as creating even greater bureaucracy.¹⁹ The new system has also been cautiously welcomed by the Biosciences Federation: “The main panel/sub-panel structure may help overcome the previous perceived lack of parity between panel judgements, but more information on panel working is required to predict this with more certainty.” However, they go on to say that the “challenging issue of how to deal with cross-disciplinary research is not addressed directly” and “without further detail it is difficult to judge whether cross-disciplinary work, applied research, and joint submissions will be dealt with more satisfactorily than before”.²⁰ The UK Computing Research Committee says “Whether the new RAE structure will be an improvement on the old depends on the panel structure, the criteria that panels will employ, and the relationship between the RAE profile gained and the funding that is awarded” and that it is “essential that panels and sub-panels are free to choose the assessment criteria that are most appropriate for each discipline”.²¹

26. In an attempt to promote consistency between panels Sir Gareth proposed that each panel should have a moderator who would sit on each sub-panel with a brief to ensure consistency of practice. The moderators of four or five adjacent panels would sit on a “super-panel” chaired by a senior moderator, who would be seconded to or employed by the funding councils. The Research Councils had “strongly supported the suggestion of setting up each panel with a moderator to ensure consistency of practice across the sub-panels” and was “disappointed that the proposed moderating mechanism no longer figures in the RAE2008 document”.²² Sir Gareth’s suggestion appears to have much merit. Sir

19 Ev 50, 55

20 Ev 31

21 Ev 38

22 Ev 41

Howard Newby had suggested that this proposal had not been rejected yet there is no mention of it in the Funding Bodies' detailed proposals on panels published in July 2004.²³ We believe that the panel/sub-panel structure is a positive step in improving consistency and improving the treatment of interdisciplinary research. We recommend that the Funding Councils seriously consider the establishment of panel moderators.

Membership

27. In the past panels were appointed by inviting nominations from professional, trade and learned bodies. In an attempt to broaden the assessment for different forms of research, there has been an attempt in recent RAEs to include panel members from outside the academic community. In our earlier Report we expressed concern about the willingness of representatives from the private sector to serve on panels.

28. Membership of the sub-panels will include people with experience in commissioning and using research—in industry, commerce and the public sector—and people with experience of research in other countries will also attend panel meetings at some stage of the assessment. The Royal Society welcomes the Funding Bodies' commitment to secure better representation on panels of people with personal experience both of conducting research and of its commercial, industrial and public service applications.²⁴ It is interesting to note that the representation of research users on panels for RAE 2001, as judged by panel chairs, had “little effect on the final grades but were useful for credibility”.²⁵ If assessors from the user communities are aware of this view then it could undermine the Funding Bodies' efforts to secure better representation. It would be a matter of concern if this were the case.

International benchmarking

29. In RAE 2001, the Funding Councils introduced an international benchmarking exercise in which the ratings of all 5 and 5* departments were validated by 290 overseas experts. All but nine agreed with the judgements of the panels. The Funding Bodies expressed few concerns about the use of overseas panel members at the time and we concluded that their use did provide support for the reliability of the grades. In the view of Sir Gareth Roberts's review team, “This improvement [in grades] was validated by the opinion of overseas experts”.²⁶

30. There has been disquiet over the use of overseas panel members. The EPSRC argued in 2001 that “the involvement of international expertise is limited so the thoroughness of the international calibration could be questioned”.²⁷ Professor Ivor Crewe said that Universities UK had “no objection in principle to asking those from outside the UK system to judge us in the light of international standards” but in written evidence Universities UK

²³ Q 73; Higher Education Funding Council for England, Scottish Higher Education Funding Council, Higher Education Funding Council for Wales, Department for Employment and Learning Northern Ireland, *Units of assessment and recruitment of panel members, the Funding Bodies*, July 2004, RAE 03/2004

²⁴ Ev 41

²⁵ *Review of research assessment*, Report by Sir Gareth Roberts to the UK funding bodies, May 2003, Annex D, para 21

²⁶ *Review of research assessment*, Report by Sir Gareth Roberts to the UK funding bodies, May 2003, para 69

²⁷ HC (2001–02) 507, Ev 77

stated that there is a “danger that the inclusion of international researchers [on panels and sub-panels] would be tokenistic, with few international researchers being asked to judge a range of disciplines at panel level”.²⁸ Their concern is that international assessors might not know enough “about the character of the UK higher education system and about the quality of work that particular institutions were submitting to the RAE”.²⁹ Professor Ian Haines is concerned that overseas assessors “are going to have a limited knowledge base and there is a very great danger that they will direct their views in certain areas. If you want to solve that problem, you need a rather large number, and that is likely to be very unwieldy”.³⁰

31. Sir Gareth Roberts’s review reported that it has been acknowledged that in 2001 there was “a weak procedure for using international experts to validate RAE grades”.³¹ It recommended a “significant international presence on each sub-panel and panel at the point at which it takes its decisions”.³² The Funding Bodies invited “views on how to secure an effective input to the assessment process by people who have direct experience of high-quality research in other countries”.³³ In July 2004, the Funding Bodies announced that each main panel would have one or two international assessors but not the sub-panels.³⁴ We recognised the problems in appointing a large number of international panellists but the Funding Bodies’ proposals for one or two assessors on the main panel is unlikely to ease Universities UK’s concerns about their tokenistic presence.

32. Sir Gareth Roberts pointed out that the international reviews conducted by the EPSRC could provide a useful source of overseas panel members. In our Report on *The Work of the Engineering and Physical Sciences Research Council*, we regretted the fact that these reviews were not conducted in the same manner by the other Research Councils to provide a more sophisticated picture of the UK’s research competitiveness than that provided by metrics. We agree that the reviewers from the EPSRC’s reviews could provide valuable input to future RAEs but we regret that other Research Councils are not undertaking similar exercises on a regular basis. **We welcome proposals to strengthen the use of overseas panel members. It should form part of a wider exercise to benchmark UK research.**

Workload

33. We expressed concern in our earlier Report about panels’ workload. The number of researchers submitted for assessment per panel member ranged from eight to 96 and HEFCE had made it clear in its advice to panel members that “you should not feel that you are required to collect, review or examine all research outputs listed”.³⁵ We noted that the

28 Ev 52

29 Q 24

30 Q 102

31 *Review of research assessment*, Report by Sir Gareth Roberts to the UK funding bodies, May 2003, para 193

32 *Review of research assessment*, Report by Sir Gareth Roberts to the UK funding bodies, May 2003, para 197

33 *Initial decisions by the UK funding bodies*, February 2004, RAE 01/2004

34 Higher Education Funding Council for England, Scottish Higher Education Funding Council, Higher Education Funding Council for Wales, Department for Employment and Learning Northern Ireland, *Units of assessment and recruitment of panel members, the Funding Bodies*, July 2004, RAE 03/2004, para 2

35 Research Assessment Exercise 2001: Panel Members Handbook, HEFCE

11 members of the chemistry panel had to sift through over 5,000 submitted outputs. We concluded in our earlier Report that HEFCE had provided inadequate resources to carry out this work. We learnt that panel members had to obtain their own copies of submitted papers.³⁶ An operational Report of RAE 2001, conducted by the management consultants Universitas and published with Sir Gareth Roberts's Report, was similarly concerned by the workload faced by panels: "The view among panel chairs is that the RAE team was overstretched and understaffed [...] It is highly probable that the team did indeed need more staff during the assessment phase".³⁷ It goes on to say that "The same degree of dedication and commitment which all those involved showed cannot be assumed for any similar further exercise".³⁸ **The panels and sub-panels need to be properly resourced. Overstretching staff and panel members could lead to panels reviewing individuals selectively and coming up with a biased or wrong conclusion on quality. Under-resourcing is an affront to the researchers and institutions who have gone to the trouble of putting the submissions together.**

34. It is clear that the workload of panels is excessive but it is less clear how it can be reduced while all higher education institutions continue to enter the RAE. An excellent opportunity to reduce the burden on panels has been missed by the Funding Bodies in their decision not to support different assessment routes. In particular our proposal to exempt top-ranking departments would reduce the number of submissions that each panel needed to consider and enable them to give closer consideration to submissions.

Assessment criteria

35. For RAE 2001, research was defined in the following terms:

"Research is to be understood as original investigation undertaken in order to gain knowledge and understanding. It includes work of direct relevance to the needs of commerce and industry, as well as to the public and voluntary sectors; scholarship; the invention and generation of ideas, images, performances and artefacts including design, where these lead to new or substantially improved insights; and the use of existing knowledge in experimental development to produce new or substantially improved materials, devices, products and processes, including design and construction. It excludes routine testing and analysis of materials, components and processes, eg for the maintenance of national standards, as distinct from the development of new analytical techniques. It also excludes the development of teaching materials that do not embody original research."³⁹

36. Sir Gareth Roberts reported that "There is significant support for a broader definition of research within research assessment, to encompass in particular applied research, research of relevance and utility, training of research students, and research that directly informs teaching". He believed that this "derives from a perception that the RAE has been far too ambiguous about the value of applied research".⁴⁰ Richard Lambert also considered

36 Ev 89, 119

37 *Review of research assessment*, Report by Sir Gareth Roberts to the UK funding bodies, May 2003, Annex D , para 9

38 *Review of research assessment*, Report by Sir Gareth Roberts to the UK funding bodies, May 2003, Annex D, para 23

39 RAE 2001, Guidance for Panel Members - Criteria and Working Methods, Annex A

40 *Review of research assessment*, Report by Sir Gareth Roberts to the UK funding bodies, May 2003, Annex E, para 18

the RAE in his *Review of Business–University Collaboration*, concluding that “World-class excellence across all types of research should be recognised and rewarded by the RAE and Research Council peer review processes. Excellent research undertaken with industry or other users should be recognised as being of equal value to excellent academic research”.⁴¹

37. In response the Funding Bodies announced that they will “ask main panels and sub-panels in all disciplines where this may be an issue to ensure that their criteria statements make clear how they will assess practice-based and applied research, according to criteria reflecting appropriate characteristics of excellence”.⁴² The Funding Bodies say they are still considering the definition of research to be used for the exercise, but from the starting point that the definition used in 2001 may need to be reviewed rather than changed fundamentally. They have agreed that the 2008 RAE will insist “that panels ensure that criteria are sufficiently flexible that all types of research excellence can be recognised”.⁴³ The Institution of Electrical Engineers remains concerned that “there will continue to be an overemphasis on publications and theoretical work”.⁴⁴ Professor Ian Haines expressed similar misgivings to us in evidence.⁴⁵

38. In our view the definition used in 2001 covers applied research sufficiently if interpreted correctly. That there is support for a definition of research to be broadened to cover “applied research, research of relevance and utility” indicates that there are problems in the weightings given to applied research by panels. If there is a perception that panels will not give parity to pure and applied research then departments will be disinclined to include applied research outputs in their submissions and ultimately to conduct this research at all.

39. Having defined the breadth of research to be considered, problems inevitably arise as to how the quality of the research outputs is determined. As in 2001, institutions will be asked in 2008 to identify in their submissions up to four pieces of work for each researcher. However, sub-panels may (with the agreement of main panels) elect to set a lower maximum of two or three items where members agree this would be appropriate to a particular unit of assessment.⁴⁶ The AUT welcomes the decision to abolish the four items rule and to allow different panels the freedom to define their own limits on the number and size of outputs. Its preference would be for a minimum number of items and for any maximum to be set at a low level.⁴⁷ The Wellcome Trust endorses the Funding Bodies’ decision to maintain the requirement of four outputs (or fewer) per individual to drive the quality, as opposed to the volume, of research outputs.⁴⁸ In some disciplines, research outputs can take years to emerge. We welcome this new flexibility but care must be taken not to set a level too low. If the bar is set too low then too many departments will clear it easily and the basis of the RAE—to allow selective funding—is undermined.

41 *Lambert Review of Business-University Collaboration, Final Report*, December 2003, Recommendation 6.1

42 *Initial decisions by the UK funding bodies*, February 2004, RAE 01/2004, para 47

43 Ev 46

44 Ev 53

45 Q 93

46 *Initial decisions by the UK funding bodies*, February 2004, RAE 01/2004, para 32

47 Ev 49

48 Ev 37

40. Research Councils UK thinks that “contributions made by researchers in promoting and communicating the outcomes of their research should also be recognised as an assessment factor”.⁴⁹ We believe that academic researchers should devote time to communicating to a wider audience but we have concerns about its use as a criterion of excellence. As a point of principle, the RAE is designed to direct funds to the best researchers and its use to encourage other behaviours is problematic. From a practical point of view, it is difficult to assess the quality of the communication and there is a danger that incorporating it into the RAE would result in poorly conceived and directed activities. We would be interested to learn how the Research Councils might base their funding decisions on the communication skills of their grant applicants.

41. We conclude that the definition of research employed in 2001 is broadly adequate. It is important that the panels give equal weight to pure and applied research and that higher education institutions perceive this to be the case. HEFCE should ensure that it is understood by everyone.

42. A further problem with the RAE has been the use by panels of the place of publication as a proxy for quality. Competition for publication in journals such as *Nature* is intense and for panels with a large number of outputs to consider it would seem reasonable to conclude that the peer review process conducted by journals did not necessarily need to be repeated. There are two main problems with this approach. Some papers published in *Nature* fail to achieve a single citation and could be considered to have had negligible impact. As Lord May reported to us, “One of the other perverse consequences you find in common rooms these days as people prepare for these things is that people talk about how many papers in *Science* and *Nature* there have been rather than what was in the papers”.⁵⁰ A researcher could choose to target publication in a highly specialised journal with a small readership drawn from the user community and hence a low impact factor, but which contains results of excellent research. Professor Ian Haines told us that “Some of the greatest break-throughs are to be found in much lesser journals, where people are working in a very specific branch of science and technology. They are often missed”.⁵¹ Judgements based solely on the impact factor of the journal could give a highly misleading assessment of the impact and quality of the research. Professor Charles Galasko argues that the “Research Assessment Exercise has been based on naive assumptions, namely that the amount of grant income and the impact factor of the journal in which the work was published is what is important, rather than the impact the research has had”. He says that “Research needs to be assessed but perhaps the best way of assessing it would be for a peer group in each discipline to evaluate the impact that the research has had in addition to the potential impact that it may have”.⁵² **It is not acceptable for peer review panels to rely on the place of publication as a guarantee of quality. We recommend that HEFCE to instruct panels to desist from this practice for RAE 2008 and ensure that panels are sufficiently large and well staffed to make informed judgements of the quality of the submissions.**

49 Ev 40

50 Q 16

51 Q 95

52 Ev 26

43. Sir Gareth recommended that panels developing their criteria for assessment should be required to ensure that these included suitable criteria for recognising the characteristics of excellence particular to such work. This would be welcome but the problem may stem from the use of the terms national and international excellence since this implies that good research should necessarily have global significance. An alternative system could employ a grading system similar to that employed by some of the Research Councils to rank their grant applications. Table 2 shows the system used by NERC, which concentrates on the potential impact.⁵³ With modification to reflect the retrospective nature of the RAE, this could be mapped on to the grading profile being adopted for RAE 2008. **The RAE should recognise that excellent research may not be internationally significant but it may transform the fortunes of a local business or the provision of public services. We recommend that quality criteria concentrate more on the impact of research rather than the place where it has been published.**

Metrics

44. Given the workload of panels, it is reasonable to consider metrics that could provide less onerous but nevertheless reliable assessments of quality. Mr Thirunamachandran outlined to us the three sets of metrics which have been used in the past:

- a) Research grant information;
- b) Publication information; and
- c) Post graduation research unit information.⁵⁴

45. Sir Gareth Roberts told us that he considered the use of metrics to be important in providing the next RAE with “a much lighter touch and less of a burden to both the academics and the assessors”.⁵⁵ Metrics have two potential applications to research assessment: first as an aid to panels in reaching conclusions; and, second, to replace the peer-review process altogether. We will consider the latter in our discussion of the future of research assessment in paragraphs 67–75 below. This difference is important since the first option would aid the decision-making of panels but not necessarily result in any lightening of the bureaucratic load on institutions unless panels issued clear guidance well in advance.

⁵³ www.nerc.ac.uk

⁵⁴ Q 62

⁵⁵ Q 4

Table 2. Pre-award grading system employed by the Natural Environment Research Council.

Grade	Research	Strategic Data and Knowledge	Shared Services and Facilities	Knowledge Transfer
$\alpha 5$	Outstanding: exceptional scientific merit and originality; expected to have major scientific impact; top 5%	Outstanding: benchmarks amongst world's best; top 5% of surveys, etc; exceptional delivery, service	Outstanding: essential & unique national service or facility; highest quality & scientific standards	Outstanding: Likely to have a major impact on some aspect of improving UK economic competitiveness or effectiveness of public services and policy; top 5%
$\alpha 4$	Excellent: at the forefront of field; will advance understanding; top 25%	Excellent: comparable to world leaders in the field; top 25%; excellent delivery, service	Excellent: essential and cost effective national service or facility; high quality & scientific standards	Excellent: Likely to have a considerable impact on some aspect of improving UK economic competitiveness or effectiveness of public services and policy; top 25%
$\alpha 3$	Very good: generally competitive science; top 60%	Very good: well thought of in the field; top 60%; very good delivery, service	Very good: important national service or facility; competitive quality	Very Good: Likely to have a reasonable impact on some aspect of improving UK economic competitiveness or effectiveness of public services and policy; top 60%
$\alpha 2$	Good: quality science, but not leading edge	Good: not leading edge; adequate delivery, service	Good: useful national service or facility; appropriate quality	Good: Likely to have a modest impact on some aspect of improving UK economic competitiveness or effectiveness of public services and policy
$\alpha 1$	Of merit: modest advance in the field	Of merit: satisfactory performance; adequate delivery & service	Of merit: sometime useful service or facility; adequate quality	Of Merit: Likely to have a minor impact on some aspect of improving UK economic competitiveness or effectiveness of public services and policy
β	Probably not advancing the field; new, useful knowledge	N/A	N/A	Probably not advancing the field.

46. Sir Gareth Roberts assured us that the “research councils and funding councils are really working very, very hard now on appropriate metrics”. He expressed confidence that these would be in place for RAE 2008.⁵⁶ Mr Thirunamachandran explained that HEFCE was “looking at other metrics, particularly in the science, engineering and technology areas, to see whether there are other metrics which could help us even further, and in the case of applied research and practice based research we think they can”.⁵⁷ The Funding Bodies said that “Sub-panels will accordingly be encouraged to work with main panels to specify datasets appropriate to their discipline”.⁵⁸ While we note Lord May’s concern over “the babble about metrics”, we support the increased use of metrics by panels.⁵⁹ It is important that panels provide a clear explanation about how they plan to use metrics as part of their deliberations. We agree with Professor Crewe that “[institutions] will need to know in advance what metrics are going to be used and they would need to be assured that there had been a very thorough appraisal of the validity of these metrics before they were used by the panels”.⁶⁰ He also insisted that “If a panel wants to know what the quality of an authoritative, historical work is, then there is no substitute for reading a book and the same goes for many of the arts and humanities and social sciences”.⁶¹ The Funding Bodies have announced that in August 2005 panels and sub-panels will issue draft working methods and criteria for consultation with a view to publishing their conclusions in November/December 2005. We appreciate that the Funding Bodies only published nomination forms for assessors in July 2004; nevertheless, we consider the timetable to be too long. **We recommend that, once formed, panels publish rapidly clear guidance on how they plan to use metrics to inform their appraisals. This should be considered a priority.**

Grading system

47. In RAE 2001, 80% of the researchers whose work was assessed were in submissions receiving one of the three top grades, while 55% were included in submissions receiving one of the top two grades (5 and 5*). The amount of discrimination inherent in the exercise is therefore less than the length of the rating scale would suggest. The scale was criticised for the “cliff edges” between grades, where comparatively fine judgements at the grade boundaries could have a disproportionate impact upon funding and reputation. This was also seen as providing a strong incentive for game-playing.⁶²

48. Sir Gareth Roberts proposed a quality profile which would set out the proportions of work in each submission reaching each of three defined “starred” quality, and this model has been accepted by the Funding Bodies with the addition of an extra grade (see Table 3).

⁵⁶ Q 4

⁵⁷ Q 62

⁵⁸ *Initial decisions by the UK funding bodies*, February 2004, RAE 01/2004, para 48

⁵⁹ Q 9

⁶⁰ Q 10

⁶¹ Q 31

⁶² See paragraphs 50-52 below

Table 3. Sample quality profile

Unit of assessment A	FTE staff submitted for assessment	Percentage of research activity in the submission judged to meet the standard for:				
		Four star	Three star	Two star	One star	Unclassified
University X	50	15	25	40	15	5
University Y	20	0	5	40	45	10

Source: The figures are for fictional universities. They do not indicate expected proportions.

The key advantages of this approach, according to the Funding Bodies, are that it will:

- Eliminate the “cliff edge” effects of the previous rating scale.
- Put an end to the “averaging” effect of previous RAE grades. It will be possible to distinguish between departments whose work is of even quality and those where the quality is less even, and to highlight the presence of “pockets of excellence”.
- Put an end to the situation, produced by the previous rating scale, where an HEI might consider leaving one or more established researchers out of a submission to ensure that it achieved a higher grade and thereby attempt to secure more funding.

49. The proposal for a new quality profile has widespread support.⁶³ The Royal Society proposed a profiling arrangement in its submission to the Roberts Review and pushed for a four star rather than a three star system, arguing that “The profiling system should result in less time and effort spent on ‘game-playing’ since the reduction in the difference in financial rewards would not warrant it”.⁶⁴ The AUT describes the new system as “a more sophisticated output than a crude numerical score”.⁶⁵ **The introduction of a quality profile is a significant step forward and, if associated with an equitable funding formula, could eliminate many of the iniquities of the previous grading system.**

Playing games

50. The evidence we received during our initial inquiry led us to conclude that “we accept the widespread view that the RAE ratings [in 2001] reflect an improvement in UK higher education research”.⁶⁶ Nevertheless, for one senior academic the improvement in results represented a “morass of fiddling, finagling and horse trading” and another told us that told us “the results are starting to lack credibility”.⁶¹ It was clear to us that universities could play games without any real improvement in research quality.⁶² This could be achieved in several ways:

- Exclusion of researchers. Departments were free to enter as many or, more pertinently, as few researchers as they wished. By excluding less productive researchers, the grade awarded could be higher. A fine line needed to be trodden since the amount of funds

⁶³ E.g. Ev 26, 37, 40

⁶⁴ Ev 42

⁶⁵ Ev 49

⁶⁶ HC (2001-02) 507, para 31

awarded depended on the number of researchers entered and thus a higher grade could be achieved at the expense of income.

- Splitting and merging departments. Researchers could be moved from a weak department to a strong one in such a way as to improve the grade of the weaker one without adversely affecting the grade of the strong one. Also, a 5* department could maintain its grade if merged with a good 4-rated department if some staff were omitted.
- Transfers between institutions can distort the RAE results. Transferred researchers need only submit two (rather than four) outputs, thus a researcher's output could be considered to be of higher quality than it really is.

51. The Funding Bodies' acceptance of Gareth Roberts's proposals for a new grading system aim to render ineffective some of these ploys. However, the proposals are generally deemed to have improved the situation but not eliminated it. A problem for universities is that they do not yet know the funding mechanism to be applied in 2008 and they risk devising strategies in a policy vacuum. Somewhat surprisingly, anecdotal reports suggest that this is not proving to be much of a disincentive: Natalie Fenton told us that it was her perception that there had already been an increase in the number of professorships being advertised in an attempt to lure the best researchers.⁶⁷ The British Medical Association's Medical Academic Staff Committee Reports that "Many institutions are re-configuring their staffing profiles in anticipation of scoring highly and redundancies are being considered, even before the full detail of the next assessment is published".⁶⁸

52. The stance taken by HEFCE during our earlier inquiry that game-playing was a legitimate part of a department's research strategy was not constructive and we are pleased to hear Sir Howard Newby's less defensive stance: "Yes, it is a problem, and we do recognise it".⁶⁹ Lord May told us that "Any system of distributing the money, whether it is the expert peer-reviewed direct costs of grants or the infrastructure costs, anything, other than just giving it out on a per-capita basis, needs rules. And the rules will govern behaviour. There is no way of avoiding it".⁷⁰ Nevertheless, the AUT argued that "more could be done to prevent this pernicious form of tactical 'games playing'" and suggested that there should be a "*nationally* agreed code of practice on research assessment involving the funding councils, Universities UK and the trade unions".⁷¹ A national code of practice has its attractions but it might prove difficult to prove that a university's behaviour was not part of a legitimate strategy. We would prefer the funding bodies to be open and honest about any unintended or unwanted consequences of their policies and methodologies, and identify mechanisms to address them. **We welcome HEFCE's acceptance that the tactics employed by universities to improve their RAE grade are not all part of a legitimate research strategy and recommend that it publishes analyses of the strategies being employed by institutions and provide guidelines on what it considers to be acceptable practices**

⁶⁷ HC (2001-02) 507

⁶⁸ Ev 54

⁶⁹ Q 53

⁷⁰ Q 40

⁷¹ Ev 49

Exclusion of researchers

53. One of the most contentious issues with previous RAEs has been the selective inclusion of researchers, i.e. those termed “research active”. The provision allowing the selection of researchers dates from 1992 with the inclusion of the new universities, in which many academics had not previously undertaken research. The post-1992 universities had proportionately fewer academics engaged in research and the selective exclusion of academics enabled the Funding Bodies to direct funds at pockets of research excellence within departments. Nevertheless, this has been seen by many as highly divisive and as undermining the career prospects of those excluded.

54. The advantage of the quality profile is that there should be no financial incentive to exclude researchers; nevertheless, it seems likely that it will still occur. The Biosciences Federation argues that the “quality profile assessment will not discourage the tactical exclusion of weaker researchers” as “many institutions, particularly the stronger ones, will be concerned about the shape of the quality profile and will not want a tail”. It says “the effect could be to drive staff into separate research or teaching categories, which may not be in the best interests of undergraduate students”.⁷² A further likely consequence will be the compilation of league tables which use the “grade point average” as a basis for ranking institutions.⁷³ In our earlier Report we discussed the use of a high RAE grade as a recruitment tool for undergraduates, arguing that “The best students, particularly from abroad, are likely to be attracted to the universities with the best RAE scores”.⁷⁴ **It seems likely that the media will defy the Funding Bodies’ best intentions and distil the quality profile down to a single figure, thus encouraging the exclusion of the least productive researchers if this is permitted.**

55. Sir Gareth Roberts told us “I see no reason at all why one cannot submit everybody. It is a dual-support system and to me, for anyone who is eligible for applying to a Research Council for money, it makes sense that they should be included in the RAE”.⁷⁵ An argument for maintaining the provision to exclude is that there are many academics whose talents lie elsewhere but who would feel obliged to focus more of their energies on research. In past RAEs the identities of those included have not been disclosed, although this may be well known within a department. We would certainly consider it a retrograde step if the status of teaching were further diminished. Sir Howard told us that a decision has not been taken on whether all academics should be included in RAE 2008.⁷⁶ We believe that enhancing the status of teaching in universities can best be achieved by complete transparency about the functions performed by different members of the academic staff. To this end, we agree with Sir Gareth Roberts that all academics eligible for Research Council funding are included in a department’s RAE submission. **We think that greater transparency about the RAE, including the public disclosure of included academics, would have many benefits. It is important to highlight the valuable work done by excellent administrators and by lecturers who invest time and intellect in their**

⁷² Ev 32

⁷³ Q 38

⁷⁴ HC (2001–02) 507, para 51

⁷⁵ Q 40

⁷⁶ Q 53

teaching. We feel that greater clarity about the role of these academics could increase the value attached to their work. We recommend that as a condition of their block grant, higher education institutions publish an annual staff audit, describing the contributions of all members of academic staff to research, teaching, administrative and other functions.

Women

56. In our earlier Report we expressed concern over the “under-representation of women in the highest-rated departments and that women have been disproportionately excluded from RAE”. We welcomed HEFCE’s “imminent research project into women in higher education research”.⁷⁷ Our conclusion was based on HEFCE’s 2000 Review of Research Funding, conducted by a committee under the chairmanship of the then Chief Executive of HEFCE, Sir Brian Fender. It recommended that “HEFCE should consider, initially through the human resources sub-group, the relative under-representation of women in the highest-rated departments and whether there are other groups who appear not to be realising their full research potential”.⁷⁸ HEFCE responded by saying that “We have to be as certain as we can be that the RAE processes do not unwittingly give rise to unwarranted discrimination”.⁷⁹ Despite this positive response, to our knowledge no research has been published by HEFCE. The issue has remained a live one, however, and in June 2004, the AUT published a Report which provided detailed figures of the representation of women in RAE submissions.⁸⁰ The study fails to provide evidence of a causal link between the RAE and women’s academic careers. The Wellcome Trust has commissioned research which showed that, while women are as successful with research grant applications, they are less likely to apply.⁸¹ Whatever the causes for this, it is reasonable to assume that fewer research grants would lead to fewer research outputs (publications) and would therefore mean that women would be less likely to be included in the RAE. **In our earlier Report we reported that women academics were more likely to take on more of the teaching and pastoral functions within departments. It is our view that the issue to be resolved here is the status accorded to academics who take on these non-research but nonetheless essential roles.**

Confidentiality

57. The Funding Bodies say that “the RAE process will not provide for either sub-panels or main panels to reach collective judgements on the overall quality of a named individual’s work and outputs, so no such collective judgements will be available to be disclosed”.⁸² In the new system sub-panels will be asked to produce a profile which reflects all of the information contained within a submission. The submission will contain a number of research outputs which can be linked to individuals, and other information which cannot

77 HC (2001-02) 507, para 42

78 HEFCE, *Review of research, Consultation Report 00/37*, Para 205

79 Fifth Special Report from the Science and Technology committee, Session 2001-02, *The Research Assessment Exercise: Government Response to the Committee's Second Report*, HC 995, Appendix 2, para 26

80 Association of University Teachers, Academic staff 2002-03 - Gender & research activity in the 2001 RAE, July 2004

81 The Wellcome Trust, *Who Applies for Research Funding?* 2001

82 *Initial decisions by the UK funding bodies*, February 2004, RAE 01/2004, para 54

be linked to individuals (metrics and strategy).⁸³ The emphasis that panels place on each of these data will vary but it seems likely that publications by individuals will be given greater weight. This prompts the UK Computing Research Committee to express concern that “if the position [confidentiality] will be able to be maintained in the face of challenge under the Freedom of Information Act, the Data Protection Act and the Human Rights legislation. [...] the effects of individual ratings becoming known may do more harm to research, through undermining morale and creating divisions inside research teams and departments, than the rating process does good in raising research quality”.⁸⁴ We do not share this concern. Academics know, or think they know, who the best performers are. We argue above that there should be disclosure of the researchers included for assessment and greater clarity of the role that individual academics play within their department. It would be a logical extension to publish an independent appraisal of academics’ research records. **HEFCE assures us that panel members, secretaries and RAE team staff will be bound by a duty of confidentiality. We anticipate that this will be challenged in the courts in a bid to reveal publicly the judgements made about the performance of researchers. We recommend that such a move should be pre-empted and that the grades awarded to individual researchers should be made public. This would bring welcome transparency to the process.**

Research competence

58. Concern has been expressed about the effect of the RAE on the careers of those not entered for the exercise. In our earlier Report we concluded that being labelled “research inactive” for tactical reasons can blight research careers, and even bring them to an end. We also heard concerns that the RAE may have contributed to the large increase in fixed term research positions.⁸⁵ In RAE 2001, departments’ submissions included a statement of the unit’s research strategy and environment. The idea was that this would inform panels’ decisions on grades. Sir Gareth described this approach as only “partially effective” since panels tended to concentrate on research outputs.⁸⁶ The operational report for RAE 2001 also notes that “Panel chairs were split between those for whom the textual commentary in forms RA5 and RA6 [which covered staffing issues and the research environment] was important or essential, and those for whom it was of little or marginal use”.⁸⁷ Sir Gareth felt that research competence needed to be separated out from any deliberations of research quality and that failure to meet agreed standards should result in some sort of penalty. He proposed that institutions should demonstrate “research competence”, separate from the assessment of research quality. He suggested four main criteria:

- a) research strategy (the coherence of an institution’s research strategy including an assessment of the credibility of its targets for obtaining funding);
- b) development of researchers, including postgraduate research students, postdoctoral researchers and junior lecturers;

⁸³ Ev 57

⁸⁴ Ev 38, 39

⁸⁵ HC (2001–02) 507, Ev 106-107

⁸⁶ *Review of research assessment*, Report by Sir Gareth Roberts to the UK funding bodies, May 2003, para 128

⁸⁷ *Review of research assessment*, Report by Sir Gareth Roberts to the UK funding bodies, May 2003, Annex D, para 32

- c) equal opportunities policies and success in putting them into practice (this would relate to an institution's policies for ensuring equality of opportunity for all its staff, not just those in research roles); and
- d) dissemination of research beyond the academic peer group. This would cover an institution's policy on encouraging a spectrum of activities, ranging from collaboration with organisations outside HE, through the use of research to enhance teaching, and work promoting the public understanding of research topics.

59. Sir Gareth proposed that an institution failing its assessment against any one of the competences would be allowed to enter the next research assessment, but would not receive funding on the basis of its performance in that assessment until it had demonstrated a satisfactory performance.⁸⁸

60. Research Councils UK also wishes to see broadening of research criteria, to include:

- a) a collaborative team-based approach to research;
- b) multidisciplinary research;
- c) a proactive relationship with research users;
- d) the provision of high quality research training;
- e) research governance; and
- f) knowledge transfer.

Sir Gareth's proposals were rejected by the Funding Bodies because of concerns that it would be "unduly complex and could impose a greater burden than the likely outcomes would justify".⁸⁹ Instead departmental research strategies will be assessed through the RAE process as in previous exercises. Issues of equal opportunities, staff development and dissemination may also be addressed by the Funding Bodies through existing mechanisms outside the research assessment process.⁹⁰ Professor Crewe pointed out that the funds to promote these activities amounted to a "substantial tranche of money".⁹¹ Research Councils UK says it is disappointed that the assessment of institutional competences has been abandoned.⁹²

61. A longstanding concern of ours has been the viability of research careers and the treatment of contract researchers.⁹³ Thus we also sympathise with attempts to address wider problems in the research environment. Nevertheless, we think the Funding Bodies' decision was the right one. If there is a demand to use financial levers to correct behaviours in higher education, then the Funding Bodies have the option of broadening an existing

88 *Review of research assessment*, Report by Sir Gareth Roberts to the UK funding bodies, May 2003, para 132

89 *Initial decisions by the UK funding bodies*, February 2004, RAE 01/2004, para 16

90 *Initial decisions by the UK funding bodies*, February 2004, RAE 01/2004, para 27

91 Q 38

92 Ev 40

93 Eighth Report from the Science and Technology Committee, Session 2001-02, *Short-Term Research Contracts in Science and Engineering*, HC 1046

mechanism such as the RAE or introducing new ones. In our earlier Report, we concluded that while the RAE had its faults, many of the wider impacts attributed to it resulted from the absence of suitable financial incentives in other aspects of universities' missions. Natalie Fenton, in supporting Sir Gareth's proposals, told us that "There should be all sorts of other factors that will have a play on the research standing of an institution, which should be taken account of within the RAE".⁹⁴ **Although Sir Gareth's proposals for the assessment of "research competence", if implemented, would place a heavier burden on the RAE, we believe that the need to promote good practice is so important that it should be used alongside other incentives to promote good practice in higher education research.**

Frequency

62. After RAE 2008, the Funding Bodies plan to work to a six-year assessment cycle. This is consistent with our recommendation of a six-yearly cycle in phase with the Spending Reviews.⁹⁵ Sir Gareth recommended that there should be light-touch "mid-point monitoring". This would be designed only to highlight significant changes in the volume of activity in each unit.⁹⁶ This was rejected by the Funding Bodies on the basis that it was unduly complex and could impose a greater burden than the likely outcomes would justify. The Royal Society and Universities UK support the decision.⁹⁷ The Institute of Physics is disappointed by this rejection, however, as is the British Society of Criminology.⁹⁸ We concluded in our earlier report that departments could apply for regrading to recognise the effects of increased investment, thus providing only a self-imposed burden. **We are disappointed that the Funding Bodies have rejected any form of mid-point monitoring. The RAE is designed to fund research excellence selectively and this funding should therefore reflect a department's current, and not only past, capabilities.**

Costs

63. There is an important distinction between the funds invested by HEFCE to ensure that the process runs smoothly and effectively and the costs imposed on institutions. We discussed the panels' workload above in paragraphs 33–34 and argued that they needed greater financial support. Concerning the costs to institutions, HEFCE told us that "The [indirect] cost of the 1996 RAE has been estimated at between £30 million and £37m and it is likely that the costs of RAE 2008 will exceed this". It comments that this "represents not much over 1% of the resources to be distributed by the funding bodies in the period 2002–03 to 2008–09 using the ratings. This is well below the proportionate cost of research grant allocation systems based upon bidding for projects". It insists that "Research quality assessment is an essential tool to provide assurance that the considerable public funds spent on research in HEIs are being put to good use" and that "much of the activity

⁹⁴ Q 119

⁹⁵ HC (2001–02) 507, para 84

⁹⁶ *Review of research assessment*, Report by Sir Gareth Roberts to the UK funding bodies, May 2003

⁹⁷ Ev 41, 51

⁹⁸ Ev 29, 37

identified in our latest costing study would have been undertaken anyway by well-managed institutions planning and reviewing their research effort".⁹⁹

64. The Funding Bodies proposals state that "In developing our plans for the next RAE we have paid particular attention to ensuring that the cost of the exercise, and the administrative burden that it will place upon HEIs, are kept to the minimum—having regard to its expected impact and to the resources to be allocated using its outcomes". The Funding Bodies calculate that the direct costs of the 2001 exercise to the Funding Bodies came to £5.6 million but that the figure for 2008 is expected to be £10 million.¹⁰⁰

65. While Universities UK is "reassured that the sector's concerns about the level of bureaucracy imposed by the current system—and potentially by the Roberts proposals—seem to have been taken on board in the revised proposals for a single assessment process", the Biosciences Federation Reports that "opinion is divided on whether the outcome justifies the burden and cost involved".¹⁰¹

66. The figures provided by the Funding Councils of the cost of the RAE to institutions do not appear to be excessive. The fact remains that this burden is resented by universities. The Funding Bodies should be sensitive to this feeling when developing their plans for 2008.

Conclusion

67. There has been a general acceptance of many of the decisions made by the Funding Bodies for RAE 2008. Universities UK has "broadly welcomed the announcement of the Initial Decisions by the Funding Councils" and the Royal Society "believe[s] that the proposals are a significant step forward".¹⁰² Many of the concerns stem from the fact that there had been only an "initial statement"; there was, in Universities UK words, a "lack of detail available on many key aspects of the proposals".¹⁰³ The Association of University Teachers (AUT) had similar worries: "Key decisions such as panel criteria and crucially, levels of funding, have yet to be decided so it is difficult to make a definite judgement at this stage".¹⁰⁴ Research Councils UK also felt that "there appears to have been some shying away from the introduction of radical reforms".¹⁰⁵ **The Funding Bodies' proposals have addressed positively many of our concerns about the RAE mechanism and HEFCE has adopted a more open-minded and constructive approach to its reform, which is a welcome change. A more radical approach, employing a range of metrics to reduce the bureaucratic burden on universities is still needed. We accept that their application will be a complex and time-consuming task for RAE and the Funding Bodies but we believe that the administrative burden should fall here rather than on the universities.**

99 Ev 47

100 *Initial decisions by the UK funding bodies*, February 2004, RAE 01/2004, para 63

101 Ev 31

102 Ev 41

103 Ev 52

104 Ev 48

105 Ev 39

4 The future

Assessment

68. Sir Howard Newby told us that each of the last two RAEs was predicted to be the last one, yet despite its apparent unpopularity, there seems to be little opposition to the principle of selective research funding. Professor Richard Joyner reports that few would regard a system based on fixed funding for each research project as “wise or affordable”.¹⁰⁶ Any selective funding system demands some sort of quality assessment. Sir Gareth Roberts’s review was termed a “Review of Research Assessment” rather than a “Review of the Research Assessment Exercise”, hinting at an initial willingness to consider more radical alternatives, yet the apparent lack of viable options has resulted in a mechanism that is clearly a reformed RAE rather than something recognisably distinct.

69. We are keen to see more fundamental reform, and we are not alone. The Royal Society says “further work needs to be done, particularly in testing out further changes that could be introduced to simplify the exercise after 2008”.¹⁰⁷ It believes that next RAE would be an ideal opportunity for testing other simpler mechanism(s) for quality assessment in parallel with the new scheme: “it might be possible to devise a more metric based system, with the capability of devising different parameters for each discipline based on one or a few metrics, such as peer reviewed grants, access to central facilities, research income from business and Government departments and possibly bibliometrics”.¹⁰⁸ It is conceivable that QR element of HEI’s block grant could be based on a single institutional submission. Professor Crewe dismissed such a suggestion on the basis that “it assumes that one can assess the quality of research in terms of institutions rather than in terms of the actual people and groups that are doing the research, who are in units which are very much smaller than an institution”.¹⁰⁹ This is a curious argument as it suggests that the institutions themselves do not know which are the best research departments and who are the best researchers. It would be disturbing if they were unable to allocate research funds internally without the help of a departmental grading exercise undertaken by a quango.

70. Sir Gareth Roberts’s review reported that there was support for assessing research solely on the basis of performance indicators, which would remove the need for a complex and labour intensive assessment process. Despite this, the review concluded that unless the system was ultimately based upon expert review it would fail to enjoy both the confidence and the consent of the academic community.¹¹⁰

71. The complete replacement of peer review with metrics is a thornier issue. In our earlier Report, we considered whether external grant income could be used as a metric. Aside from the arguments that this would effectively reward a grant applicant twice and that it measures inputs rather than outputs, we found that project grant income closely correlated

¹⁰⁶ Ev 56

¹⁰⁷ Ev 41

¹⁰⁸ Ev 42

¹⁰⁹ Q 17

¹¹⁰ *Review of research assessment*, Report by Sir Gareth Roberts to the UK funding bodies, May 2003, para 116

with QR in the top 20–30 institutions (in terms of income) but that below that Research Council income tended to represent a smaller proportion of research income. To use Research Council income as means of calculating QR would have an adverse impact on the weaker research institutions. We concluded that the top institutions could therefore opt out of the RAE and rely on external project funding as a metric. The Association of the British Pharmaceutical Industry is keen that the Research Councils’ “more robust” peer review process should be employed.¹¹¹

72. A report published in September 2004 by the Institute of Public Policy Research recommends that the RAE be scrapped along with the dual support system. Funds would be transferred from the DfES (and necessarily the devolved administration) and channelled through the Research Councils. We see a number of problems with this solution. It would mean that higher education funding in Wales, Scotland and Northern Ireland would have to be restored to Westminster. Institutions’ funding would be subject to increased fluctuations, particularly in small departments. Despite the Report’s title, *Diverse Missions: Achieving access and excellence in the post-16 sector*, it would reduce diversity since institutions would provide an incentive to undertake research of the type supported by the Research Councils to the detriment of research of relevance to industry and the public sector.

73. The correlation described above works well at institutional level but less so at departmental level, reflecting to a large extent differences in the research structures between arts and humanities and the sciences. A similar problem would result if measures of research output, such as journal citations, were employed. A key feature of QR funding is that universities need not allocate the funds as their RAE scores might indicate; indeed, Sir Howard Newby indicated that institutions are specifically advised not to.¹¹² Nevertheless, we were given the impression in our earlier inquiry that it would be politically difficult for a vice-chancellor to reward lower performing departments at the expense of the high flyers. This problem stems largely from the publication of high profile departmental (Units of Assessment) ratings. It might prove easier for vice-chancellors to use their QR funding more flexibly if departments were unaware of the contribution they had made to the institution’s research income. Sir Howard Newby told us that there had been support during the consultation for the retention of a system based on peer review. The Funding Bodies must be sensitive to this wish but we believe that the development of metrics could command the support of the academic community if it were seen to be transparent and fair. HEFCE has rejected this approach, stating that there is “no significant support for the abolition of the RAE or for its replacement by a system based upon any method other than subject based expert review”.¹¹³ The AUT agrees: “If the RAE is to continue in any form, then peer review must remain central to the assessment process”.¹¹⁴ We have some sympathy with this position as the peer review process has the merit of being trusted and well understood by the academic research community. However, we have seen that the process imposes a burden on panels and departments. If methods can be

¹¹¹ Ev 55

¹¹² Q 49

¹¹³ Ev 45

¹¹⁴ Ev 40

found that can come to the same conclusion with reduced bureaucracy then these deserve support.

74. There is a danger that recommending a fundamental review of research assessment would result in another Roberts-type review. Sir Gareth's review team did some valuable work but the process is flawed in that it relied on the academic research community as its primary source of input. During the review Sir Gareth expressed some frustration at the lack of new ideas. This is disappointing given that one of the main functions of academic research is to come up with new ideas. Professor Ian Haines may have identified the problem: "there are too many vested interests. There are a lot of institutions that do well out of it. The institutions that do not do well are concerned about a fundamental re-think because they might do even worse than they do now".¹¹⁵ For this reason, any further review must be conducted at arms' length to the Funding Bodies and the academic community. **We conclude that a range of measures could be used to replace the peer review process in some subject areas, such as the physical sciences. There are strong reasons to believe that they could be as reliable as the current system while being more cost effective and imposing less of a burden on institutions and panel members. We recommend that the Funding Bodies commission an external study to consider options.**

Timing

75. The Funding Bodies agreed with Sir Gareth Roberts that the next RAE will be completed in 2008. The decision to delay the exercise until 2008, rather than completing it in 2007, reflected strong representations made for allowing adequate time for HEIs and panels to prepare fully, even if this meant initially stretching the preferred six-year cycle.¹¹⁶

76. Research Councils UK have a "preference for the revised RAE to be carried out in 2008–09".¹¹⁷ The AUT says in its evidence that "there is some logic in establishing the next RAE to coincide with the rhythms of the Government's Comprehensive Spending Review, [but] the 2007–8 timetable is a tight one".¹¹⁸

77. We have argued that radical reform should be considered but we have doubts that such changes could be introduced in time for 2008. This leaves the option of delaying the RAE to provide the time required to develop an alternative or accept that 2014 is a more realistic timescale and proceed with the 2008 exercise as planned. A major drawback to delaying the next RAE would be that, until the next assessment, funding would remain based on the results of RAE 2001. As Professor Crewe told us, "To do so would be to set in aspic until 2010 or 2011 the allocation of research funding to universities based on the performance of institutions or parts of institutions in the mid to late-1990s and I cannot believe that that is actually in the interests of the research base of this country".¹¹⁹ Natalie Fenton told us that "those who got graded 4 last time and worked really very hard to get up to a 5 would be triple gutted if they were told they will not have the opportunity to increase their

¹¹⁵ Q 127

¹¹⁶ *Initial decisions by the UK funding bodies*, February 2004, RAE 01/2004, para 21

¹¹⁷ Ev 40

¹¹⁸ Ev 48

¹¹⁹ Q 10

funding'.¹²⁰ We also accept Professor Adrian Smith's point that "any attempt to put back the time of the next RAE would have serious implications for the actual internal dynamics of managing the process".¹²¹ These problems would make delaying the next RAE unsatisfactory unless some readjustment were possible or if the quality profile could be retrospectively applied to the 2001 data. HEFCE has told us that while in theory this could be done by reconvening the panels, the workbooks of the panels were destroyed in accordance with the Data Protection Act.¹²² **We accept that there are practical difficulties in delaying the next RAE and recommend that the RAE continue as proposed in 2008 but that the Funding Bodies draw up a clear timetable for the development of alternative models of research assessment.**

¹²⁰ Q 125

¹²¹ Q 13

¹²² Ev 57

5 Funding decisions and their impact

78. Perhaps the most contentious issue surrounding the Funding Bodies' proposals is their refusal to include with the plans for RAE 2008 any guidance on the funding mechanisms to be used. Universities UK is "very concerned about the review's lack of openness regarding funding implications" and that "the funding of the RAE will continue to be open to retrospective manipulation".¹²³ According to Save British Science, "there remain very serious problems with the new proposals. The most serious is that institutions will not have any idea in advance how their assessment scores will translate into financial rewards".¹²⁴ The Biosciences Federation agrees: "The Funding Councils should indicate the approximate ratios of funding for work at different star levels". It goes on, "[the] RAE is such an important issue for institutions that it is essential that the goalposts are clearly defined at the outset to aid sensible planning".¹²⁵ Research Councils UK argue that "more clarity is required about how the research quality profiles will be translated into financial allocations".¹²⁶ The AUT "believes strongly that the funding levels for the different 'star' ratings must be published *prior to the exercise*".¹²⁷ Professor Adrian Smith told us that "we really do need to know as soon as possible from the Funding Council the broad-brush sense in which they are going to make the funding allocations".¹²⁸ Despite this, HEFCE told us that further details about the technical aspects of converting profiles into QR funding will be announced during 2005. It says "It is simply impossible for the Funding Councils to make commitments regarding funding when virtually every dimension of the formula remains unknown".¹²⁹

79. We agree with our witnesses that it is impossible to decouple the RAE from the funding decisions based on it. During our earlier inquiry, HEFCE made much of the RAE's positive effect on universities' research strategies. We do not dispute this, but a department's research strategy will be closely intertwined with its financial projections. By not giving an indication about how funding decisions will be made, universities are being asked to develop investment strategies with no basis for calculating the potential return. Under the current system, a 3b department makes a decision on whether to invest to become a 4 or even 5-rated department in the knowledge that improvement to 3a will result in no extra funding. At present we have no indication about which parts of a department's quality profile will attract funding. HEFCE told us that it will provide further details about the technical aspects of converting profiles into QR funding during 2005, only three years from the census date for RAE 2008. **Departments need to know how to play the RAE game, yet HEFCE is asking them to do it blindfolded. HEFCE should draw up guidance to universities on how the quality profile will be used to calculate the funding. We appreciate that there are a number of variables that cannot be known in advance of the RAE but HEFCE should have the capability to produce estimates which would enable it**

¹²³ Ev 52

¹²⁴ Ev 26

¹²⁵ Ev 33

¹²⁶ Ev 40

¹²⁷ Ev 49

¹²⁸ Q 13

¹²⁹ Ev 57

to provide indications about the level of funding provided to each band of the profile. It should do this without delay.

Trends in funding decisions

80. HEFCE's decision for the funding weights for the 2002–03 academic year was made during the course of our earlier inquiry. HEFCE was in a difficult position. RAE 2001 had resulted in a significant increase in the number of 5 and 5* departments. In RAE 1996 31% of research active staff worked in 573 departments rated 5 and 5*. In 2001 the figure was 55% in 1,081 departments. Faced with a fixed budget, HEFCE had little alternative but to change the funding formula it had employed for 2001–02. We argued at the time that it should have done more to anticipate the problem and make clear to universities that they should make no assumptions about the funding formula to be used. The level of selectivity that had been employed at the time of RAE 2001 had broad support and there was an expectation that funding would be allocated on a similar basis. Indeed, many of the strategic investments made by universities will have been made on this expectation. HEFCE chose to maintain the level of funding to 5 and 5* departments and eliminated funding for 3a departments and below, thus increasing the degree of selectivity. Many of the hardest hit were in the new universities which were building up their research capability from a relatively low base. Departments rated 4 now get much less than they used to and, in 2004–05, no 3a and 3b departments will get QR funding (see Table 4). We concluded that if cuts needed to be faced they should have been applied equally across all grades.

81. Since then, the decisions taken by HEFCE have further concentrated funding (see Table 4) to the point where HEFCE describes it as “highly selective”.¹³⁰ Sir Howard Newby told us that for 2002–03 “resources were not made available to fully fund it [RAE 2001]”.¹³¹ This betrays an acceptance that there was an ideal funding formula, which had been used previously and would have been applied to the results of RAE 2001 if the resources had been available. It is strange, therefore, that HEFCE should choose to depart further from this ideal when there was no financial pressure to do so. **It is not clear to us why HEFCE has deemed it necessary to further increase the level of selectivity of QR funding. We regret that it will intensify many of the problems caused by the RAE and the funding decisions based on it.**

Capability funding

82. In our 2002 Report we advocated a funding stream for developing research capacity. We proposed that departments could apply for development money through a bidding process and would be assessed by subject panels based upon the RAE UoAs. Applications would be based on a business plan which should indicate how they intended to achieve a higher research quality rating.¹³² The rationale for this fund was that departments should be able to develop their research capacity from a low base and that a high level of selectivity made this difficult. The problem had been compounded by the abolition of the CollR

¹³⁰ HEFCE, *Funding higher education in England: How HEFCE allocates its funds*, May 2004/23

¹³¹ Q 79

¹³² HC (2001-02) 507, para 86

(Collaborative Research) funding stream for the post-1992 universities, which aimed “to support the further realisation of research potential [in the former polytechnics] by encouraging the selective use of funds, and also by supporting ‘collaboration as a way of developing research potential’ where appropriate”.¹³³ This amounted to £16 million a year.

Table 4. Funding weights employed by HEFCE in recent years.

RAE rating	Funding weights for:			
	2001–02	2002–03	2003–04	2004–05
5*	4.05	2.71	3.357	3.362
5	3.375	1.89	2.793	2.739
4	2.25	1.00	1	1
3a	1.50	0.31	0	0
3b	1.00	0	0	0
2	0	0	0	0
1	0	0	0	0

83. For 2004–05 HEFCE announced that it was providing £17.5 million as a capability fund. This will be restricted to research in emerging subject areas where the research base is currently not as strong as in more established subjects. Seven units of assessment (UoAs) are eligible for this funding, on the basis that they have low proportions of staff in departments rated 4, 5 or 5*, and had relatively high proportions of staff in 2002–03 attributable to 3a or 3b-rated departments.¹³⁴ The seven subjects eligible for this funding are:

- a) Nursing;
- b) Other studies and professions allied to medicine;
- c) Social work;
- d) Art and design;
- e) Communication, cultural and media studies;
- f) Drama, dance and performing arts; and
- g) Sports-related subjects.

84. The fund will be distributed pro rata to the number of research-active academic staff in RAE submissions rated 3a or 3b, weighted according to the cost weight for the UoA. Institutions must submit three-year research strategies. This fund bears many similarities

¹³³ HEFCE, *Review of CollR*, September 2001, p 2

¹³⁴ HEFCE, *Funding higher education in England: How HEFCE allocates its funds*, May 2004/23, paras 87-89

to the funding stream we advocated. A key difference is the restriction of HEFCE's scheme to seven subject areas. There is no provision for the development of mainstream science and engineering within the capability fund which would allow new university departments to develop their research capacity in these important subjects. We take issue with the restriction of eligible subjects. While we do not doubt that these subjects need developmental funding, it is too prescriptive and ignores the potential in other new areas of research. Also, it is not clear how HEFCE will judge between different applications. While we welcome the fund, it should be deployed more flexibly. Departments should be encouraged to submit ambitious plans for development and expansion. There is an urgent need in some areas to develop centres of excellence. There is a danger that this modest fund could be distributed too thinly. We note the comments of the UK Computing Research Committee, which says "there must be sufficient money for research outside the elite group to support the development of new ideas and talented researchers wherever they may emerge".¹³⁵ We do not see any value in excluding departments that are unranked or graded 1 or 2. Funding should be based on potential not on past record. **We welcome HEFCE's capability funding as a means of building research capability and promoting dynamism in the research base. We are concerned, however, that it is too restrictive. We believe that all departments should be eligible and grants should be awarded on the strengths of their research and investment strategies.**

Impact

85. In our 2002 Report we reported substantial "collateral damage" caused by the RAE. Some of this related to the way research was conducted in our universities but we also concluded that the RAE, and the funding decisions based on it, create incentives for universities that could lead to them neglecting other areas of their functions, such as:

- a) teaching;
- b) community involvement;
- c) commercial activity; and
- d) research of local or regional significance.

Research

86. In 2002 HEFCE recognised that "Any assessment process, particularly one as important to its subjects as the RAE, will distort the very thing it intends to measure".¹³⁶ We considered in our earlier Report whether the RAE distorts the nature of research being undertaken; that it discourages longer term "blue skies" research and forces researchers to look for short-term goals; that publication practice is being affected; and that research careers are being undermined, in particular for women.

87. The UK Computing Research Committee draws attention to the "increasing focus on safe, incremental research and an unwillingness to cross discipline boundaries or to explore

¹³⁵ Ev 38

¹³⁶ HC (2001-02) 507, Ev 7, para 60

adventurous ideas that may not lead to publishable results. The original RAE contributed to this change, by focusing on recently published research and thereby compelling researchers to maintain a stream of publishable work. The Funding Councils' proposals will not relieve this pressure".¹³⁷ They say that "The RAE is often presumed to inhibit interdisciplinary research. A 1999 Report found no evidence that panels treat interdisciplinary research differently but reported a widespread perception that they did so. It noted that this perception could itself influence the willingness of institutions to support interdisciplinary research". Nevertheless, the Funding Bodies report that they "are giving active consideration to Sir Gareth Roberts' suggestion that virtual 'colleges of assessors' be recruited in established interdisciplinary areas which do not fit neatly into the RAE panel structure".¹³⁸ Universities UK is "encouraged by the intention that the 2008 RAE will, in principle, take better account of vital applied, inter- and multi-disciplinary research".¹³⁹ In their proposals published in July 2004, the Funding Bodies give more information about how the RAE will handle interdisciplinary research—mainly by "improved arrangements for the sub-panels to take additional specialist advice". This they believe "will ensure, wherever a sub-panel has to consider significant bodies of interdisciplinary research, that such research is assessed taking account of advice from people who fully understand it". Also "the two-tier panel structure will be helpful where research is submitted that draws on the approaches and methods of related disciplines within the same main panel field".¹⁴⁰

Concentration of research and departmental closures

88. We described above HEFCE's increasingly selective funding policies which have been pursued without any clear rationale. It has been a concern of many within the research community that research funding has become increasingly concentrated in a handful of universities. The Geographical Society with The Institute of British Geographers has "serious concerns about the potential for further concentrations of research funding" since "The many 4-rated geography departments in UK (35% are rated 4 in the 2001 RAE) are an important bedrock and, along with 3a and 3b departments, a significant training ground for UK geographical research".¹⁴¹ The Biosciences Federation also "opposes any further narrowing of the research base".¹⁴² Universities UK shares this concern and "has been deeply concerned by the cuts in funding to departments rated 4 and below, and the Government's policy of further concentration of research funding".¹⁴³ Concern is not limited to academia. The White Paper *The Future of Higher Education*, published in January 2003, assumed that the concentration of research would enhance national research performance. This assumption is based on virtually no supporting evidence. By contrast, a study commissioned by Universities UK from Evidence Ltd, *Funding Research Diversity: The impact of further concentration on university research performance and regional research capacity* demonstrated that investment in departments scoring a 4 or 3 in RAE

¹³⁷ Ev 38

¹³⁸ Ev 46

¹³⁹ Ev 51

¹⁴⁰ The Funding Bodies, *Units of assessment and recruitment of panel members*, 03/2004, July 2004

¹⁴¹ Ev 30

¹⁴² Ev 33

¹⁴³ Ev 51

2001 was important for developing the performance of the research base at regional, national and international levels".¹⁴⁴ The Office of Science and Technology commissioned its own study from the Science Policy Research Unit at the University of Sussex, which concluded that "there seems to be little if any convincing evidence to justify a government policy explicitly aimed at further concentration of research resources on large departments or large universities in the UK on the grounds of superior economic efficiency".¹⁴⁵

89. The Wellcome Trust has "serious concerns over how the results of RAE 2008 will be utilised in the allocation of research funds. It is our belief that the level of research funding is already highly selective and should not become even more so". The Trust says that it is "vital that the funding method provides support for teams and infrastructure and ultimately provides funds to departments that are fit for purpose".¹⁴⁶

90. That research has become increasingly selective is not open to doubt. Less easy to establish is the link between this trend and the closure of physical science departments. In our earlier Report we concluded that "The RAE may not be the primary cause of departmental closures but we suspect that it is a contributory factor".¹⁴⁷ HEFCE's withering response was, "We do not understand what point is being made here. The RAE provides a mechanism for allowing continued funding for excellent research, even if student numbers are falling".¹⁴⁸ Sir Howard had been in post for little over six months at HEFCE when we received its reply and in the two years since he has clearly mellowed: "The vast bulk of those [departmental] closures [...] have been in Grade 1 and 2 RAE categorised departments, and they have also been in very small departments, so this is where vice chancellors have been [...] taking their investment decisions to invest in areas of growth, and disinvest from areas of [decline]".¹⁴⁹ Professor Richard Joyner had little doubt that the RAE had played a part and was concerned that the worst was to come, "because what has happened as a result of the 2001 financial settlement is that you now have an insurmountable entry barrier to anybody who wants to get into research in science and technology, and you have a big exit penalty".¹⁵⁰ **We are pleased that Sir Howard Newby now recognises that a policy of highly selective research funding, based on the RAE, has had an effect on the viability of university departments in core subjects.** The RAE does not take place in a vacuum and further changes are also now taking place in higher education following the 2003 White Paper and the introduction of variable tuition fees. **It is too early to say what the precise impact of those changes will be.** Concerns expressed so far, however, suggest that variable fees may also lead to closures of further university departments, quite possibly in the physical sciences. **The operation of the RAE and variable fees may, therefore be mutually self re-inforcing and HEFCE should remain vigilant in these respects.**

¹⁴⁴ Ev 51

¹⁴⁵ von Tunzelmann N, Ranga, M, Martin B and Geuna A, *The Effects of Size on Research Performance: A SPRU Review*, June 2003

¹⁴⁶ Ev 37

¹⁴⁷ Para 44

¹⁴⁸ HC (2001-02) 995

¹⁴⁹ Q 69

¹⁵⁰ Q 83

Regional dimension

91. It could be argued that departmental closures are not a problem in themselves if research capacity in those subjects is not impaired. The geographical pattern of these closures could be significant, however. If it left regions of the UK without adequate provision then this could impact on the access to academic research for local businesses and public services. It would also provide a more limited choice of subjects for potential undergraduates who wish to study locally. Rising debt among undergraduates may increase the number of students wishing to study at their nearest HEI. It was reassuring that Sir Howard recognised this as a problem: “because these closures have been uncoordinated, unplanned and somewhat random, there are some difficulties”.¹⁵¹ We therefore welcome the thoughtful suggestions made by HEFCE in supplementary evidence and the measures outlined in the Investment Framework, which provide the option for HEFCE to intervene when a department is threatened by closure by demanding 12 months’ notice for closure and by offering extra funds in some cases.¹⁵² **The provisions for HEFCE to delay closure or offer funding to struggling departments have been criticised for threatening the autonomy of universities but this encroachment on their independence is a price worth paying for the preservation of core disciplines on a national basis.** We accept that these powers should be used with restraint but this is an important shift in policy we welcome. Given the additional concerns over the possible effects of variable fees, these new powers for HEFCE are also extremely timely.

The teaching–research link

92. The link between teaching and research is hotly contested. In our earlier Report on the RAE we expressed support for “high-quality teaching in a high-quality research environment” and concern that teaching-only departments would not provide the environment to inspire science students to embark on a research career. “The Institute [of Physics] welcomed the explicit recognition of the importance of the link between teaching and research in the Funding Bodies’ consultation document” but it was disappointed that the Funding Bodies’ proposals made no mention of teaching.¹⁵³ The Biosciences Federation believes that the “RAE will continue to serve poorly less research-active staff who may make a major contribution to teaching and administration” and that there is “a problem with young staff of great promise who may, as yet, have only one or two papers”. The Federation remarked that the provision for such staff was considered quite extensively by the Roberts group, but is not mentioned in the Funding Bodies Initial Statement other than in a vague reference to panel and sub-panel consideration of departmental strategies and staff development.¹⁵⁴ The research–teaching link has been considered by the new Higher Education Research Forum under the chairmanship of Sir Graeme Davies and we await its findings with interest.

¹⁵¹ Q 71

¹⁵² Ev 57; HM Treasury, *Science & Innovation Investment Framework 2004 – 2014*, July 2004, para 6.49-6.50

¹⁵³ Ev 29

¹⁵⁴ Ev 34

6 The Dual Support system and HE funding

93. A strain on the dual support system has been that over the years, a marked imbalance has arisen between the two streams. Project funding from the Research Councils and other sources (such as charities, industry and the EU) has increased disproportionately to that from the Funding Bodies, particularly in the medical and biosciences. Between 1993–94 and 1999–2000, project funding to universities from all sources increased by 52%; research funding from the Higher Education Funding Councils increased by only 25%. Sir Howard Newby said this imbalance had risen to £900 million a year.¹⁵⁵ Universities UK says that “QR funding levels are inadequate to support current volume, and there is an enormous strain on this side of the dual support system”.¹⁵⁶ There have been concerns that the reviews of the two legs of the dual support system have not been fully integrated. The Biosciences Federation reports criticism in its community that there is a “failure to integrate the RAE review with the ongoing assessment of dual support, or to set it in context with the whole of government policy on higher education”.¹⁵⁷ In our 2003 Scrutiny report of the OST, we expressed concern over the “Government’s piecemeal approach to research funding”.¹⁵⁸

94. In its *Science and Innovation Investment Framework 2004–2014*, the Government has sought to consider both legs of support holistically. Its solution, prompted by the Transparency Review undertaken in advance of SR 2002, is to move to a situation where universities are obliged to recover the full economic costs of the research that they undertake. The Research Councils will move, towards the end of the decade, to a situation in which they pay the full economic costs aside from any investment in capital infrastructure. Much of the annual real-terms increase in the Research Councils’ budget (5.6%) over the SR 2004 period will contribute to these costs. In addition, HEFCE’s research budget will increase 6% annually in real terms. Thus the imbalance in the two funding streams has been significantly closed. This is welcome but it is not clear to us that this has been achieved in the best way. The Royal Society is “concerned about the extra administrative burdens and over-management of university research in the recent proposals for costing Research Council projects”.¹⁵⁹ The Royal Society’s President, Lord May, recently blamed the move to fund the full economic costs on “career civil servants, who know very little of the world they are looking at, who have produced a set of rules which, in my opinion, are little short of lunatic in their notion [...] Kafka couldn’t have dreamed this up!”.¹⁶⁰ He told us that the review had been “incompetent” and had not looked at the consequences of the change nor considered other countries’ funding models.¹⁶¹ **The Government says it will assess the “trajectory” towards the full economic cost model in 2006 in time for the next Spending Review. We hope that it will use the opportunity to review whether the model is a viable one and whether the aim of**

¹⁵⁵ Q 52

¹⁵⁶ Ev 51

¹⁵⁷ Ev 51

¹⁵⁸ Para 66

¹⁵⁹ Royal Society response to the 2004 Spending Review, 12 July 2004

¹⁶⁰ Bob May: Political science, Education Guardian, 20 July 2004

¹⁶¹ Q 6

rebalancing the dual support system could be achieved by a straightforward increase in the research funds available to the Funding Bodies.

95. The Government has repeatedly stressed its commitment to the dual support system and recent reviews by the OST and HEFCE have looked into the mechanisms used for allocating funding for each leg rather than a reappraisal of the whole system. By using a prospective peer review for one leg (Research Councils) and retrospective review for the other (Funding Bodies), the dual support system is generally considered to provide a good balance. The Royal Society published a paper in November 2003 in which it questioned the functioning of the system. It recommended a fundamental review but it did not suggest alternatives. A key issue was that the funding through both streams corresponds closely and that in effect there were two parallel review systems coming to the same conclusion. The Government's *Science and Innovation Investment Framework 2004–2014* reaffirms its commitment to the dual support system, although it recognises that reform of both legs is required.¹⁶² In giving evidence Lord May told us that "the ultimate aim for us is to have a tertiary sector which has much of the genuine diversity of the strengths of the US".¹⁶³ Professor Joyner agreed that an advantage of the US system is that "there is a whole range of places where you can go to get something".¹⁶⁴ Lord May's comments are consistent with many of the sentiments we expressed in our 2002 Report, that the RAE had a distorting effect as the only game in town, and as Natalie Fenton complained "now governs absolutely everything ... that goes on in institutions".¹⁶⁵ The British Medical Association's Medical Academic Staff Committee reports that medical schools are putting an increasing emphasis on research at the expense of clinical and teaching functions.¹⁶⁶

96. Diversity can only be achieved by a range of funding incentives or a range of funders employing different funding criteria. The Government has set a target for industrial R&D expenditure of 1.7% of GDP, an increase from the 2002 level of 1.24%. It would be reasonable to expect some of that increase to be used to fund research in UK universities and this should provide a welcome counterbalance to the QR funding. **We would like to see diversity in higher education research funding but it is hard to see how this can be achieved while the RAE dominates the funding landscape. We have concluded that new incentives for all areas of universities' work are needed.** Quality assessment for teaching has proved problematic and unpopular. The Government should consider more radical solutions, perhaps awarding teaching funds on the basis of outputs rather than inputs as has been the case. The "third leg" funds for knowledge transfer have grown in recent years but it is not clear whether they are yet sufficient to act as an adequate counterbalance to RAE-based funding. We conclude that a greater diversity of funding streams would act as a counterbalance to the RAE. **The proposed European Research Council could contribute, as would the greater availability of research funds from other Government Departments.**

¹⁶² Para 3.5

¹⁶³ Q 14

¹⁶⁴ Q 97

¹⁶⁵ Q 82

¹⁶⁶ Ev 54

Conclusions and recommendations

1. The Funding Bodies should have looked at the quality of the arguments set out in the responses to their consultation and not just the numbers. The move away from the “one size fits all” approach advocated by Sir Gareth Roberts is an important principle which should have been adopted. We consider the Funding Bodies to be unjustifiably conservative in their proposals. We do not see it as HEFCE’s role to protect the sensitivities of universities. (Paragraph 16)
2. We believe that the panel/sub-panel structure is a positive step in improving consistency and improving the treatment of interdisciplinary research. We recommend that the Funding Councils seriously consider the establishment of panel moderators. (Paragraph 26)
3. We welcome proposals to strengthen the use of overseas panel members. It should form part of a wider exercise to benchmark UK research. (Paragraph 32)
4. The panels and sub-panels need to be properly resourced. Overstretching staff and panel members could lead to panels reviewing individuals selectively and coming up with a biased or wrong conclusion on quality. Under-resourcing is an affront to the researchers and institutions who have gone to the trouble of putting the submissions together. (Paragraph 33)
5. It is clear that the workload of panels is excessive but it is less clear how it can be reduced while all higher education institutions continue to enter the RAE. An excellent opportunity to reduce the burden on panels has been missed by the Funding Bodies in their decision not to support different assessment routes. In particular our proposal to exempt top-ranking departments would reduce the number of submissions that each panel needed to consider and enable them to give closer consideration to submissions. (Paragraph 34)
6. We conclude that the definition of research employed in 2001 is broadly adequate. It is important that the panels give equal weight to pure and applied research and that higher education institutions perceive this to be the case. HEFCE should ensure that it is understood by everyone. (Paragraph 41)
7. It is not acceptable for peer review panels to rely on the place of publication as a guarantee of quality. We recommend that HEFCE to instruct panels to desist from this practice for RAE 2008 and ensure that panels are sufficiently large and well staffed to make informed judgements of the quality of the submissions. (Paragraph 42)
8. The RAE should recognise that excellent research may not be internationally significant but it may transform the fortunes of a local business or the provision of public services. We recommend that quality criteria concentrate more on the impact of research rather than the place where it has been published. (Paragraph 43)

9. We recommend that, once formed, panels publish rapidly clear guidance on how they plan to use metrics to inform their appraisals. This should be considered a priority. (Paragraph 46)
10. The introduction of a quality profile is a significant step forward and, if associated with an equitable funding formula, could eliminate many of the inequities of the previous grading system. (Paragraph 49)
11. We welcome HEFCE's acceptance that the tactics employed by universities to improve their RAE grade are not all part of a legitimate research strategy and recommend that it publishes analyses of the strategies being employed by institutions and provide guidelines on what it considers to be acceptable practices. (Paragraph 52)
12. It seems likely that the media will defy the Funding Bodies' best intentions and distil the quality profile down to a single figure, thus encouraging the exclusion of the least productive researchers if this is permitted. (Paragraph 54)
13. We think that greater transparency about the RAE, including the public disclosure of included academics, would have many benefits. It is important to highlight the valuable work done by excellent administrators and by lecturers who invest time and intellect in their teaching. We feel that greater clarity about the role of these academics could increase the value attached to their work. We recommend that as a condition of their block grant, higher education institutions publish an annual staff audit, describing the contributions of all members of academic staff to research, teaching, administrative and other functions. (Paragraph 55)
14. In our earlier Report we reported that women academics were more likely to take on more of the teaching and pastoral functions within departments. It is our view that the issue to be resolved here is the status accorded to academics who take on these non-research but nonetheless essential roles. (Paragraph 56)
15. HEFCE assures us that panel members, secretaries and RAE team staff will be bound by a duty of confidentiality. We anticipate that this will be challenged in the courts in a bid to reveal publicly the judgements made about the performance of researchers. We recommend that such a move should be pre-empted and that the grades awarded to individual researchers should be made public. This would bring welcome transparency to the process. (Paragraph 57)
16. Although Sir Gareth's proposals for the assessment of "research competence", if implemented, would place a heavier burden on the RAE, we believe that the need to promote good practice is so important that it should be used alongside other incentives to promote good practice in higher education research. (Paragraph 61)
17. We are disappointed that the Funding Bodies have rejected any form of mid-point monitoring. The RAE is designed to fund research excellence selectively and this funding should therefore reflect a department's current, and not only past, capabilities. (Paragraph 62)

18. The figures provided by the Funding Councils of the cost of the RAE to institutions do not appear to be excessive. The fact remains that this burden is resented by universities. The Funding Bodies should be sensitive to this feeling when developing their plans for 2008. (Paragraph 66)
19. The Funding Bodies' proposals have addressed positively many of our concerns about the RAE mechanism and HEFCE has adopted a more open-minded and constructive approach to its reform, which is a welcome change. A more radical approach, employing a range of metrics to reduce the bureaucratic burden on universities is still needed. We accept that their application will be a complex and time-consuming task for RAE and the Funding Bodies but we believe that the administrative burden should fall here rather than on the universities. (Paragraph 67)
20. We conclude that a range of measures could be used to replace the peer review process in some subject areas, such as the physical sciences. There are strong reasons to believe that they could be as reliable as the current system while being more cost effective and imposing less of a burden on institutions and panel members. We recommend that the Funding Bodies commission an external study to consider options. (Paragraph 74)
21. We accept that there are practical difficulties in delaying the next RAE and recommend that the RAE continue as proposed in 2008 but that the Funding Bodies draw up a clear timetable for the development of alternative models of research assessment. (Paragraph 77)
22. Departments need to know how to play the RAE game, yet HEFCE is asking them to do it blindfolded. HEFCE should draw up guidance to universities on how the quality profile will be used to calculate the funding. We appreciate that there are a number of variables that cannot be known in advance of the RAE but HEFCE should have the capability to produce estimates which would enable it to provide indications about the level of funding provided to each band of the profile. It should do this without delay. (Paragraph 79)
23. It is not clear to us why HEFCE has deemed it necessary to further increase the level of selectivity of QR funding. We regret that it will intensify many of the problems caused by the RAE and the funding decisions based on it. (Paragraph 81)
24. We welcome HEFCE's capability funding as a means of building research capability and promoting dynamism in the research base. We are concerned, however, that it is too restrictive. We believe that all departments should be eligible and grants should be awarded on the strengths of their research and investment strategies. (Paragraph 84)
25. We are pleased that Sir Howard Newby now recognises that a policy of highly selective research funding, based on the RAE, has had an effect on the viability of university departments in core subjects. The RAE does not take place in a vacuum and further changes are also now taking place in higher education following the 2003 White Paper and the introduction of variable tuition fees. It is too early to say what the precise impact of those changes will be. Concerns expressed so far, however,

suggest that variable fees may also lead to closures of further university departments, quite possibly in the physical sciences. The operation of the RAE and variable fees may, therefore be mutually self re-inforcing and HEFCE should remain vigilant in these respects. (Paragraph 90)

26. The provisions for HEFCE to delay closure or offer funding to struggling departments have been criticised for threatening the autonomy of universities but this encroachment on their independence is a price worth paying for the preservation of core disciplines on a national basis. We accept that these powers should be used with restraint but this is an important shift in policy we welcome. (Paragraph 91)
27. The Government says it will assess the “trajectory” towards the full economic cost model in 2006 in time for the next Spending Review. We hope that it will use the opportunity to review whether the model is a viable one and whether the aim of rebalancing the dual support system could be achieved by a straightforward increase in the research funds available to the Funding Bodies. (Paragraph 94)
28. We would like to see diversity in higher education research funding but it is hard to see how this can be achieved while the RAE dominates the funding landscape. We have concluded that new incentives for all areas of universities’ work are needed. Quality assessment for teaching has proved problematic and unpopular. The Government should consider more radical solutions, perhaps awarding teaching funds on the basis of outputs rather than inputs as has been the case. The “third leg” funds for knowledge transfer have grown in recent years but it is not clear whether they are yet sufficient to act as an adequate counterbalance to RAE-based funding. We conclude that a greater diversity of funding streams would act as a counterbalance to the RAE. The proposed European Research Council could contribute, as would the greater availability of research funds from other Government Departments. (Paragraph 96)

Formal Minutes

Wednesday 15 September 2004

Members Present

Dr Ian Gibson, in the Chair

Paul Farrelly
Dr Evan Harris
Dr Brian Iddon
Mr Robert Key

Mr Tony McWalter
Geraldine Smith
Bob Spink
Dr Desmond Turner

The Committee deliberated.

Draft Report (Research Assessment Exercise: a re-assessment), proposed by the Chairman, brought up and read.

Ordered, That the draft Report be read a second time, paragraph by paragraph.

Paragraphs 1 to 96 read and agreed to.

Resolved, That the Report be the Eleventh Report of the Committee to the House.

Ordered, That the Chairman do make the Report to the House.

Ordered, That the Appendices to the Minutes of Evidence taken before the Committee be reported to the House.

[Adjourned till Wednesday 13 October at 9 o'clock.]

Witnesses

Wednesday 12 May 2004

Page

Lord May of Oxford, a Member of the House of Lords, President, The Royal Society, **Professor Adrian Smith**, Principal, Queen Mary University of London, **Professor Ivor Crewe**, Vice-Chancellor, University of Essex, Universities UK, and **Professor Sir Gareth Roberts**, President, Wolfson College, Oxford,

Ev 1

Sir Howard Newby, Chief Executive, and **Mr Rama Thirunamachandran**, Director of Research and Knowledge Transfer, the Higher Education Funding Council for England

Ev 9

Wednesday 7 June 2004

Ms Natalie Fenton, Senior Lecturer in Communications and Media Studies, Loughborough University, **Professor Ian Haines**, Director of the Graduate School, London Metropolitan University, **Professor Richard Joyner**, Dean of Research and Graduate Studies, Research Office, Nottingham Trent University, **Dr Steve Wharton**, Department of European Studies and Modern Languages, University of Bath

Ev 16

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5	Biosciences Federation	Ev 31
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15	British Medical Association Medical Academic Staff Committee's	Ev 54
16	Association of the British Pharmaceutical Industry	Ev 55
17	Dr Ian Terrell, Ultralab	Ev 56
18	Professor Richard Joyner	Ev 56

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Second Report	Chief Executive of the Medical Research Council: Introductory Hearing (<i>Reply HC 629</i>)	HC 55
Third Report	The Work of the Biotechnology and Biological Sciences Research Council (<i>Reply HC 526</i>)	HC 6
Fourth Report	Office of Science and Technology: Scrutiny Report 2003 (<i>Reply HC 588</i>)	HC 316
Fifth Report	<i>Too Little too late? Government Investment in Nanotechnology</i> (<i>Reply HC 650</i>)	HC 56
Sixth Report	Within REACH: the EU's new chemicals strategy (<i>Reply HC 895</i>)	HC 172
Seventh Report	Director General for Higher Education: Introductory Hearing (<i>Reply HC 1015</i>)	HC 461
Eighth Report	The Work of the Council for the Central Laboratory of the Research Councils	HC 462
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First Report	The Work of the Particle Physics and Astronomy Research Council (<i>Reply HC 507</i>)	HC 161
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Third Report	The Work of the Medical Research Council (<i>Reply Cm 5834</i>)	HC 132
Fourth Report	Towards a Non-Carbon Fuel Economy: Research, Development and Demonstration (<i>Reply HC 745</i>)	HC 55
Fifth Report	The Work of the Natural Environment Research Council (<i>Reply HC 1161</i>)	HC 674
Sixth Report	UK Science and Europe: Value for Money? (<i>Reply HC 1162</i>)	HC 386
Seventh Report	Light Pollution and Astronomy (<i>Reply HC 127, 2003-04</i>)	HC 747
Eighth Report	The Scientific Response to Terrorism (<i>Reply Cm 6108</i>)	HC 415
Ninth Report	The Work of the Engineering and Physical Sciences Research Council (<i>Reply HC 169, 2003-04</i>)	HC 936

Session 2001-02

First Report	Cancer Research – A Follow-Up (<i>Reply Cm 5532</i>)	HC 444
Second Report	The Research Assessment Exercise (<i>Reply HC 995</i>)	HC 507
Third Report	Science Education from 14 to 19 (<i>Reply HC 1204</i>)	HC 508
Fourth Report	Developments in Human Genetics and Embryology (<i>Reply Cm 5693</i>)	HC 791
Fifth Report	Government Funding of the Scientific Learned Societies (<i>Reply HC 53</i>)	HC 774
Sixth Report	National Endowment for Science, Technology and the Arts: A Follow-Up (<i>Reply HC 276</i>)	HC 1064
Seventh Report	The Office of Science and Technology: Scrutiny Report 2002 (<i>Reply HC 293</i>)	HC 860
Eighth Report	Short-Term Research Contracts in Science and Engineering (<i>Reply HC 442</i>)	HC 1046

Oral evidence

**Taken before the Science and Technology Committee
on Wednesday 19 May 2004**

Members present:

Dr Ian Gibson, in the Chair

Paul Farrelly
Dr Evan Harris
Dr Brian Iddon
Mr Robert Key

Mr Tony McWalter
Bob Spink
Dr Desmond Turner

Witnesses: Lord May of Oxford, a Member of the House of Lords, President, the Royal Society, **Professor Adrian Smith**, Principal, Queen Mary University of London, and **Professor Ivor Crewe**, Vice-Chancellor, University of Essex and President of Universities UK, and **Professor Sir Gareth Roberts**, President, Wolfson College, Oxford, examined.

Q1 Chairman: Can I thank you all for coming along this morning and let me just start by saying to Gareth Roberts, thank you very much indeed for keeping us informed of your inquiry and your investigation into what was going on and filling us in; it has kept us on tap and interested, but certainly we are aware from our work in our constituencies and so on of the feelings around this issue in the academic community and how important it is to many aspects of the higher education policy of the Government, so thank you very much. You have not aged a day!

Professor Sir Gareth Roberts: Neither have you, Chairman!

Q2 Chairman: Let me start off by asking you, would you call your proposals radical reform in some way? How would you categorise them?

Professor Sir Gareth Roberts: I think we can still look forward to 2008–09 and look forward to the Research Assessment Exercise. There are some very, very important changes which are proposed and the changes which I think really will make a big difference are, for example, the tiered panel structure to make sure that we really do have consistency across the assessment in adjacent subjects and an opportunity to look at standards across those adjacent subjects, to make sure that applied research as well as practice-based research is given equal emphasis to pure and basic research, and that was a promise I made to Richard Lambert in fact while he was preparing his review, to make sure that if the quality was there, they should be assessed equally. Then probably the biggest reform of all was the quality profile which effectively will lead to a continuous funding scale rather than the cliff-edge scenarios that we have had with previous RAEs. I am sure you will applaud the thought of introducing submissions based on groups of people. That is the way we do research in science in particular and many other subjects too, so there is an opportunity here, I think, for some of the people whom we call ‘contract researchers’ to become involved in the exercise as well. I think there are quite a few substantial

improvements and all of those changes that I have mentioned gained at least a seven to one majority in the consultation paper which we put out.

Q3 Chairman: So that was your referendum, was it?

Professor Sir Gareth Roberts: In a sense it was, but I think one recognises that the RAE is really a historical compromise between the Government’s need to introduce performance indicators and accountability on the one hand for the £1.3 billion it spends and then the desire of the academic community to ensure that if their work is going to be assessed, that it needs to be based on expert peer review, where I think the majority there is about 98% of the community in favour of that.

Q4 Chairman: I think we agree with the fact that there have been some really big moves forward in incorporating everybody into it. It is a really good move and there is no dodging and weaving and so on which did go on. However, one question which comes through which I think I have to ask all of you is that when you read the evidence which is put before us, there are always people saying, “This is only a sort of halfway house in 2008. There are other things we would like to consider, funding streams and so on”, so are we going through this in a half-baked way? Should we look at the whole funding process in universities before we set this up again with perhaps any repercussions which prevent a full analysis of where the money goes and how much is needed? I am saying let’s abandon the 2008, I guess, and let’s get it right in 2010.

Professor Sir Gareth Roberts: Well, I think the key issue is that we have had 18 years experience of RAE assessment and we are heading now for an improved assessment process in 2008–09. The next assessment needs to be a much lighter touch and less of a burden to both the academics and the assessors at that time, and I think the secret to that is metrics. You may be aware that the research councils and funding councils are really working very, very hard now on appropriate metrics. Even the AHRB and the ESRC are enthused by the prospect, I think, of seeing if

19 May 2004 Lord May of Oxford, Professor Adrian Smith, Professor Ivor Crewe
and Professor Sir Gareth Roberts

they can learn from metrics even in their disciplines. Certainly in 2008–09 I would be shocked if benchmarks from an international point of view were not based on some suitable metrics that we have been working on in the interim. Better still, I would like to see the physical sciences, engineering, hopefully the life sciences and medicine too, those panels guided by suitable metrics, so there will be more faith, I think, in using metrics which will make the whole assessment process much lighter.

Q5 Chairman: And they will be ready by 2008, you reckon?

Professor Sir Gareth Roberts: I believe so. There is a tremendous amount of work going on at the present time. You may not know this, but in Germany, in Australia and in Japan they are thinking of introducing an assessment process based on expert peer review. Clearly they want to learn from the British experience and again the message is coming across that it has transformed, in my belief, the way universities “strategise” about research, but, more than that, that we are thinking of, if we can, a lighter-touch assessment which they will learn from, so they are putting work into metrics as well, and there is a really big initiative to see if we can compare across the patch, the standards in our different countries.

Q6 Chairman: Let me invite your compatriots to say something about my challenge to abandon the 2008 until you have all the other feeders in there and do it once and for all with all of the other parts in place. Our evidence suggests that there are other things going on behind the scenes and you have mentioned yourself the funding councils and so on. You hope they will be there in 2008, but let’s give it a bit more time and get it right. Lord May, do you have a view?

Lord May of Oxford: Yes. Firstly, I would endorse everything that Gareth has said. I agree with you that the report of the work that Gareth has done is really helpful. I would also take a moment to make it clear that it is absolutely necessary that there be two streams of support for research, the project itself, peer reviewed, easily handled, and the is vitally important infrastructure support in central hands. I would agree that if you look around the world at how other places do that, there is a lot to be learned from us. Interestingly, you have just mentioned Japan, Germany and Australia, and in all three of those places, because I have been involved in some of this metric work, I have met with a select committee in Japan, in Australia with the Prime Minister’s Science Advisory Council which he chairs, and in Germany, so they do look to us to learn. Nonetheless, I would resonate with what you have just said. I think we are committed to the next assessment in 2008 with all the improvements in it, but I would like us now, and this is the position of the Royal Society Council, as we move to 2008 to be thinking more broadly, as you just said, of the whole picture of funding in science because at the moment the greatest worry of the Royal Society Council is not the RAE in its transmogrified form, but the proposals from OST for indirect costs of including

even investigator salaries as a direct cost and costing each individual proposal’s indirect costs, both of which are proposals which could only have come, I regret to say, from an investigation which was incompetent, did not look at what the consequences are, did not look at other countries, and that needs a really harder look than it has had. Lastly, I would say that ultimately the aim also has always to be to ask, however we are allocating funding, “What behaviour is it going to promote?”, so it has got simultaneously to be a just and an appropriately competitive distribution of both the direct and infrastructure indirect funds, but also it has to ask, “Are these well-intentioned actions going to produce perverse consequences?”, as the department-based RAE does in its inhibition of co-operative behaviour among departments.

Q7 Chairman: So would you postpone the 2008 assessment until all of this visionary analysis takes place?

Lord May of Oxford: In a perfect world, I would maybe wish to try, but I think the inertia of this system, it is like trying to turn a tanker around, and I think it would cause too much dislocation. There are huge time lags anyhow in the RAE. You are evaluating people on the publications which are derived from research done earlier, which derived from funding they got earlier, and there are huge time lags in it.

Q8 Chairman: Would you not like to know what the funding implications might be though?

Lord May of Oxford: I would really like at the same time as we move to the next RAE in 2008 to be thinking now of a fundamental, in-the-round review of what we do next.

Q9 Chairman: Do you think that how the research has been used as a metric is perhaps more important than the paper it is published in?

Lord May of Oxford: I would say very quickly, and this is a subject in which I have, as it were, professional credentials by this time, that metrics are one of many tools and they have got many faults. One has to be thinking more of the nature of the creative enterprise and, in thinking more widely, I would go further and say that we want to recognise that for funding some of the infrastructure things, look at what agile universities did with the Business Expansion Scheme when it existed. That produced a lot of creative and sensible building which was market tested, and that is how most building goes up in the private and public universities in the United States through tax-free municipal bonds, so a larger look can be very much wider. I get a little worried sometimes at the babble about metrics.

Q10 Chairman: Ivor, you have been very quiet and so has Adrian, so how do your members feel?

Professor Crewe: First of all, I do endorse what both Gareth Roberts and Rob May have said about the need to examine the research funding of the higher educational sector in the round rather than have

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and Professor Sir Gareth Roberts**

separate consultations and examinations of the RAE on the one hand, research council funding on another and sustainability on the third and so on. However, having said that, I do not believe that the UK members would be in favour of postponing the 2008 RAE. To do so would be to set in aspic until 2010 or 2011 the allocation of research funding to universities based on the performance of institutions or parts of institutions in the mid to late-1990s and I cannot believe that that is actually in the interests of the research base of this country, so I think we should go ahead with the 2008 RAE. What universities are looking for is clarity for 2008 about the way in which the RAE will work—clarity in some detail—and some indication of the likely financial return for research performance. What really dismayed the university sector over the last RAE was the retrospective manipulation of the research funding allocation only after the results were known which was very damaging and very disruptive to universities' research financial planning. On metrics, that applies in particular, by which I mean that although institutions would have no objection in principle to a greater use of metrics, particularly if this led to a lighter touch, they will need to know in advance what metrics are going to be used and they would need to be assured that there had been a very thorough appraisal of the validity of these metrics before they were used by the panels. Proceeding with metrics, but with some caution, I think, is what we are looking for.

Q11 Bob Spink: Chairman, I am just quite astounded. This is 2004 and we are looking at what is going to happen in 2008, which is a long way off. I am just astounded at the acceptance of inertia where we are looking at picking up a few benchmarks, checking them out, getting them as promises so that we can use them and then changing the system, so I do not see why there should be this acceptance that the system cannot be changed in time for 2008 or even 2008 knocked on the head so that we can move forward with a new system. There seems to be just an acceptance that it cannot happen. Am I missing something here? It really is not rocket science, to be honest.

Professor Sir Gareth Roberts: The plan, I think, and you might get this confirmed by Sir Howard Newby shortly, is that we will have the rules of engagement published in about a year's time and by then the individual panels will have mentioned exactly what weight they would place on metrics. We will have that in place by April next year, so there is no reason at all why metrics cannot be used quite usefully in the next RAE.

Q12 Dr Iddon: The facts show that there have been disproportionate increases between HEFCE funding and all other funding. I have got some statistics here. In the period 1993–94 financial year up to the 1999–2000 financial year, the facts show that HEFCE funding increased by 25% whilst funding from the research councils and all other sources, including charities, government

departments, industry and the EU, increased by 52%, double in fact, which suggests that there is something wrong with the dual-support system. Do you think it has had its day?

Professor Sir Gareth Roberts: I am a huge supporter of the dual-support system, as I think ministers are in the OST and DfES. It is the envy of other people in Europe. When they know, as they do, about the dual-support system in the UK they wish they had one. I think it is a nice balance. It has got slightly out of kilter with the Funding Council money not keeping pace with the injections of research money into OST, but that is the basis of the report which Lord May mentioned, the sustainability one. Like him, I think the advice on the principal investigators is not right, but nonetheless, the spirit of trying to get sustainable funding within a nicely balanced dual-support system has to be the way forward, I think.

Q13 Dr Iddon: I am coming to Lord May separately, so I wonder if I could turn to the other two members of the panel before I do so.

Professor Smith: Several of these points for those of us who have to run Higher Education institutions come back to the same thing; it is the sustainability and the ability to plan and manage over time. I think at this stage any attempt to put back the time of the next RAE would have serious implications for the actual internal dynamics of managing the process. The point you make about the drift apart of the underpinning HEFCE contribution in the dual-support system is important and one of the main, big arguments from UUK is that that component needs to be increased. We do not see it as signalling the end of the dual-support system, but if the two bits get too far out of kilter, the bit which is coming through to the universities for the basic support and the infrastructure is increasingly being stressed. The volume of research which is coming through charities, for example, is exploding, but we are not getting the comparable increase in sustaining the infrastructure. There are a lot of implications here just for the management of the process—being able to plan and invest ahead. In terms of that planning and forward investment, echoing something which Ivor Crewe said, I think we really do need to know as soon as possible from the Funding Council the broad-brush sense in which they are going to make the funding allocations. Of course we know we cannot be talking absolute sums of money, but, for example, what are to be the ratios of financial return in the new system for four stars, three stars, two stars or one star? We do not want the retrospective position again where we suddenly find after the act that two stars and three stars are not being funded or whatever. I think that kind of clarification upfront is vital for those of us who are called upon to well-manage the system.

Q14 Dr Iddon: Lord May, the Royal Society have suggested that the dual-support system does need a fundamental review and you have been rather sceptical of it, as the Royal Society, but we do not

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appear to have had any alternatives suggested by the Royal Society. I wonder if you could answer both of those points.

Lord May of Oxford: Firstly, I confess a grievous incompetence. Using the term dual-support system to mean looking at the two strands was a great stupidity on our part, and my part in particular. All countries have to have two strands of funding, the direct costs and the infrastructure, and all countries do, but it is just how you handle them. To expand on that a little. In Japan, for example, much of the direct costs are just given out on a per-capita basis, as is the infrastructure money, and the net result is that, in terms of what they get in papers, citations and other impact measures for what they spend, is one-fifth of what we get. The United States, on the other hand, is hugely complicated and it does both things differently and in a much more diverse way than we do at the moment as our system expands to embrace as large a fraction of young people. I say that partly because I see the ultimate aim for us is to have a tertiary sector which has much of the genuine diversity of the strengths of the US system in that the different institutions within them are diverse and among them are diverse, and, to my mind, one of the greatest problems and unintended consequences of the current RAE is that it is a unidimensional totem pole which focuses too much on the basic research exercise when there are so many other things which are important, not least teaching and the service to local and regional communities. Against that background, I reassert that, as an idealist, and, Ian, I know it was an accusation, not praise, but I enjoyed our exchange the other night here when you called me an idealist, but I am a pragmatic idealist—

Q15 Chairman: A romantic idealist.

Lord May of Oxford: If I were a real romantic, I would wish to take a step back and think fundamentally right now, but, as a realist, I think it is not on and I think that is why we all agree that we are committed to the greatly improved 2008 RAE. I hope we are not committed to including PI salaries and stuff, which is a different question, but I hope you will address it, but we ought now to be thinking about funding in the round. We are only thinking of the balance, as my colleagues here have said, and I agree with everything which has been said, which is unusual, as you know.

Q16 Bob Spink: There is not a lot of diversity in assessment routes, is there?

Lord May of Oxford: That is why I would wish for this more fundamental review. I must say, I am also worried about too much emphasis on so-called metrics. One of the other perverse consequences you find in common rooms these days as people prepare for these things is that people talk about how many papers in *Science* and *Nature* there have been rather than what was in the papers (and I speak from a position of strength of lots of papers in *Science* and *Nature*) and it is a curious and, if pursued too long, a very damaging change in the culture. Our focus

should be on the ideas and on the judgment of peers about their importance, not where they were published.

Q17 Bob Spink: I wonder what the panel thought of this Committee's recommendation that top-rated departments, for instance, should use a metric, that is, their ability to attract external funding in order to save time and costs and probably be more effective?

Professor Crewe: I think the difficulty with that proposal is that it assumes that one can assess the quality of research in terms of institutions rather than in terms of the actual people and groups that are doing the research, who are in units which are very much smaller than an institution. The quality of research should be based on the assessment of those who are doing it and they are typically in groups of six or eight or ten. An assessment at departmental level may well be appropriate and that is indeed what the Research Assessment Exercise does, but an assessment at an institutional level loses a great deal of information about where the best research has been done.

Q18 Bob Spink: But it can make a very effective proxy given that there is a very low turnover at the individual level.

Professor Sir Gareth Roberts: I think in subjects like chemistry and so on, it is a good proxy for high-quality research. On the other hand, we have to remember that this exercise covers the social sciences, arts and humanities where really it is very, very difficult to have that sort of metric, in my view.

Q19 Bob Spink: Do you think it is fair for me to say that the funding bodies are one-club golfers given that they reject the three-track approach to assessment?

Professor Sir Gareth Roberts: Well, the consultation paper gave people huge freedom to suggest whatever they wanted and, first of all, 98%, I think it was, came out in favour of expert peer review rather than a system based on metrics or a historic or a self-assessment approach. When it came to the three-track approach, I think it was fifty-fifty approximately and, by and large, what HEFCE and the other funding councils did was to say, "We will be guided by the community if there is a large majority in favour of a certain change", so I think about 50% of people were actually in favour of the three-track approach.

Q20 Bob Spink: Why were there people against it?

Professor Sir Gareth Roberts: Well, don't ask me because I proposed that scheme, but I think it was mainly the pride factor. I think the RAE is a big game in town and I think all want to be part of it. I think there are alternative ways of rewarding research and the way people engage with the community. Those in other institutions who are against would have benefited had they gone down the three-track approach because that would have been a much lighter touch for those people.

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Q21 Bob Spink: I think you are right.

Professor Sir Gareth Roberts: Really, Chairman, there are two reasons why people speak against the RAE. One of them we have touched on and Adrian Smith has mentioned is the link to funding, not the Research Assessment Exercise process itself, but the link to funding. The other one is whether it has damaged teaching and learning in institutions. I think that we ought between now and 2008/09 to go overboard in trying to stress the true value of teaching and learning. Certainly in my previous university, Sheffield, we promoted people for creative teaching, many of them, not just on the basis of research. I think now that the teaching quality assessments have gone, and they were hugely unpopular, now that they have been replaced by a lighter-touch assessment, the institutional audits by the QAA, I think we ought to be encouraging the QAA auditors to put at the top of the list, "Are universities rewarding good teaching in terms of promotion, in terms of differential salaries and the like?"

Q22 Chairman: But the Higher Education Bill which will presumably go through after the Lords stage now is going to put a lot more functions on universities too in terms of access and so on.

Professor Sir Gareth Roberts: Well, I appreciate those as well, but I believe—

Q23 Chairman: The poor people who will have to do it are having their jobs doubled, are they not?

Professor Sir Gareth Roberts: Well, I really think you have to play to people's strengths, some people are really very good teachers and what one has to do is reward those people. Maybe one should have a role—this is a quick thought—for those who are not included in an RAE and maybe their institution should receive a 5% premium perhaps to enable them to keep up with their subject via their professional institutions or in other ways so that they disengage from doing research themselves, but they keep tabs on what other people are doing in research and so on.

Q24 Dr Turner: Professor Crewe, you have expressed some views on the international review as part of the process and concern about the possibility that they may be merely tokenistic. What measures would you suggest were taken to ensure that they are not simply there as tokens, but make a real contribution to the process?

Professor Crewe: I think the only concern I have got on the part of Universities UK was that the actual use made of non-UK assessors in the last RAE was relatively small. We have certainly no objection in principle to asking those from outside the UK system to judge us in the light of international standards. Probably Sir Howard Newby, whom I know you will be talking to later on, can give you a better answer than I can about what I believe to have been some of the difficulties the Funding Council had in making full use of international assessors, particularly those who knew enough about the UK

system to make good judgments. What I think the UK would not want to see would be the placing on panels of international assessors who either did not have, or were not given, the opportunity to inform themselves fully both about the character of the UK higher education system and about the quality of work that particular institutions were submitting to the RAE. It is a matter of practical improvements in the use of international assessors.

Q25 Dr Turner: Yes, but I am still not quite clear how you would remedy the current difficulties.

Professor Crewe: Well, I understand, and again I do not want to put words in the mouth of Sir Howard, but I understand that the Funding Council has some difficulty in recruiting enough suitable international assessors and then finding a way in which they could be fully involved in the assessment process. I think it would probably be easier for him than for me to explain how they might go about making improvements next time.

Professor Sir Gareth Roberts: In my report, I did mention a scheme which does get round this problem. The research councils, and I am thinking in particular of the EPSRC, are just embarking on an international review of physics where they have 12 international experts coming in to spend real time in this country assessing physics. In my report I think I mentioned that it would be sensible for a couple of those people, who really will hopefully by then have understood the research in that subject in this country, perhaps to join the international panels. Another thing which is maybe worth mentioning is that the Germans, I have now had two discussions with them recently, would be more than happy to have a couple of pilot studies with us where we have a joint German and UK team assessing a certain subject or two.

Q26 Chairman: But that has not been agreed yet presumably?

Professor Sir Gareth Roberts: Well, it has been agreed in private between a couple of consenting adults.

Q27 Chairman: But not funded?

Professor Sir Gareth Roberts: It could well happen. **Lord May of Oxford:** I would just say very quickly, on the teaching discussion connected with the discussion on encouraging diversity, that our current system promotes a mindset which says that either you have a chemistry department which has an active programme of research and produces PhDs or you do not teach chemistry at the university. I think that is crazy. I think we ought to be looking at a much more fundamental way to give universities options that some of the departments maybe do not run active research programme for all the faculty, but still core subjects like chemistry and physics still have to be taught; and that is something I would suggest.

Q28 Dr Turner: Sir Gareth, how was your suggestion received by HEFCE?

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Professor Sir Gareth Roberts: The joint German one?

Q29 Dr Turner: Yes.

Professor Sir Gareth Roberts: Well, they have actually supported a workshop in Oxford in fact to explore the matter further in September, so we will have a meeting there to discuss the pros and cons of it.

Q30 Dr Turner: So they have not sanctioned it. How do you see the difficulties in developing metrics which are going to be used in a comparative way, but are going to be very different for different disciplines? What problems do you see there?

Professor Sir Gareth Roberts: Well, at the moment there are two studies going on into metrics. One of them is to look at subjects where practice-based research is really quite important and of course this is one of the problems with conventional metrics: how on earth do you assess practice-based research where a piece of research might have an impact on surgery or social policy and so on? So HEFCE has now established, I think, five working groups into nursing, engineering, art and design, management and education really to try and understand more about practice-based research and whether it is possible to evaluate it in some form as a metric, so that is one exercise which is taking place. The ESRC and the AHRB are thinking of metrics which perhaps have not been used in the RAE quite as much in the past, like esteem indicators, people who have maybe chaired important committees, who are on or who lead certain editorial boards and so on. They are really giving a hard look at it. My gut feeling is that they will come to the conclusion that in the arts and humanities particularly there is no substitute for a full-blooded RAE.

Q31 Chairman: Ivor Crewe, with gimlet eyes there, is itching to say something.

Professor Crewe: I just want to endorse what Gareth Roberts has said. If a panel wants to know what the quality of an authoritative, historical work is, then there is no substitute for reading a book and the same goes for many of the arts and humanities and social sciences. Metrics can provide some supplementary support for the considerations of a panel, but I would be very worried if it was thought that they were some kind of magic wand, some shortcut which could replace the deliberation of peers on the quality of the research which has been submitted.

Q32 Dr Turner: The other big problem of course is the assessment by panels of the more traditional research in terms of publications. How do you feel that this actually measures up as a way of assessing the impact of research? Do you think that numbers of citations in the right journals is adequate given that there is not a sufficient lapse of time to assess what impact the research has had in leading to other

developments or through into the innovation process or whatever? Do you think that we could do better in evaluating the research impact?

Lord May of Oxford: I think they can be a helpful guide, but they really only have meaning at really coarse levels of aggregation. At the level of individual departments, I think they can be a very frail reed. You also have to have a very sophisticated awareness of the hugely different patterns among disciplines. For example, the average, the distance between publication and the modal citation in some areas is 18 months and in other areas it is eight years (and the impact factors average over the past three years incidentally), so there are all sorts of problems. To make international comparisons, I think citations are really meaningful, although even there there are problems. At the level of entire institutions, they are tricky, and at the level of small units, like departments, they are indicative, but you cannot use them in isolation.

Professor Sir Gareth Roberts: I have some data here which I can leave with the Committee which I only received this week from Evidence UK, a company based in Leeds, and they really do show very nicely, I think, just how this country has benefited, probably from the RAE, as there have been lots of other changes around in the last 15 years too, but if you look at citations in the very best journals in the world, we show a very, very steady improvement. The United States, on the other hand, using the same journals, shows a decline and this really is quite interesting and I would be happy to leave those.

Lord May of Oxford: In the top 1% of all cited papers in science, medicine and engineering, scaled against population, and it would be even better if it was scaled against GDP, we were behind the US ten years ago and we are ahead of them now.

Professor Sir Gareth Roberts: One of these charts actually shows just that.

Lord May of Oxford: That level of aggregation is meaningful.

Q33 Dr Turner: The second half of my question was the relationship with the impact both in terms of other research developments, which are built on by other people, the enabling bit of it, and the link through to innovation where we clearly still fall a long way behind the United States.

Professor Sir Gareth Roberts: I think the Lambert Report will come up with extra money for this sort of third-leg funding and of course there needs to be accountability for that, so in looking at that work, I think there will be some Brownie points to be earned from numbers of licensing arrangements and spin-outs and I think you will see a dramatic improvement and a continuation of the increase in our position.

Lord May of Oxford: We need some extra totem poles other than just basic research.

Q34 Dr Turner: Do we not need some sort of mechanism, and I do not have it, of assessing the potential importance of research in ten years' time

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after it has been published or whenever, or it could be 30 years before it leads to something in some cases?

Professor Sir Gareth Roberts: I see no reason why you cannot have a paper submitted, maybe one which was submitted in 1989, resubmitted in the next RAE where, on reflection, you can see the impact which that basic research had made. That might be one way.

Q35 Paul Farrelly: What concerns you most about the terms in which the funding bodies rejected your proposals, that departments do not demonstrate research quality, but they must demonstrate research competence which you define in certain ways as the management and the development of a strategy in departments?

Professor Sir Gareth Roberts: Well, as you know, I featured that very strongly because I really do believe that the previous RAES have neglected the human dimension, the way research students are managed, contract researchers are looked at, probationary staff are managed. The solution here is I think that the funding councils will now include this in their institutional audits every five years when they go on a visit to an institution. Research competences, as we have talked about, will, I think, be examined carefully. There was also the interesting aspect of research links to teaching, how good research can impact on teaching, and Sir Graeme Davies, in his small working group which is reporting in the next month or two, has been asked to look very carefully at that, so although my recommendation was not accepted as part of the RAE, it is going to be embraced by the funding councils, I believe, in other ways.

Q36 Paul Farrelly: Would you envisage that this field of research competence will also be included, looking at how the universities play the system and jockey for position in terms of positioning themselves for the exercise itself?

Professor Smith: We have touched several times on the linkage between teaching and research. Bob May has mentioned it and we are now looking at the management of the whole lot. There is something I think we should not duck here. We are focusing here on the RAE and focusing on strands of research money, but actually the existence of the academic departments on the ground in institutions across science and engineering in the current funding model is dependent on students putting their bums on seats, and there is a fundamental issue there in terms of sustainability which is outwith the particular dynamics of the research funding.

Q37 Paul Farrelly: I would just like Professor Roberts to answer that last point as to how your proposal in research competence made recommendations that the exercise look at how universities develop their capacities, and that presumably would include how they might "games-play" as they go through the exercise.

Professor Sir Gareth Roberts: Well, in the RAE Review we did try very hard to avoid the games-playing and in terms of the names submitted for the RAE assessment, I think we have done that. There is a lot more, I think, which we can do for the researchers in academe. Lord Sainsbury announced, I think, a couple of days ago that I have been asked by the Funders' Forum to chair the Research Careers Initiative and continue work towards developing a new concordat, one which would cover all the things I have just mentioned. If that is done, in parallel with the QAA making sure through their institutional audits they look at the way universities approach the whole aspect of teaching and how research links into it, how staff are managed, how research students are managed, I think there is a very legitimate challenge for the groups that do visit these institutions.

Q38 Paul Farrelly: To the rest of the panel, I know that as we went through the Higher Education debate recently that the universities resisted, by kicking and screaming, any suggestions that OFFA might become an Ofsted for universities, but in what ways do you think the Research Assessment Exercise could be used for promoting better practices and research competence, as defined by Professor Roberts, within the universities?

Professor Crewe: I wonder if I could make two points, one in answer to Mr Farrelly's question and one about games-playing. In addition to the new remit of institutional audit, I think it also ought to be mentioned that the Funding Council does now expect all universities to provide a human resources strategy in return for the rewarding and developing staff initiative, of which there is now quite a substantial tranche of money. These human resource strategies must cover such issues as the management of contract research staff and also quite specifically the encouragement of high-quality teaching as well as research amongst staff by means of better rewards and better training for teachers. So I think there are two quite separate ways in which the universities are under legitimate pressure and requirements from the Funding Council to ensure that teaching as well as research is rewarded. If I can say something about games-playing, I know that Gareth Roberts tried very hard to produce a system that would reduce games-playing and the Funding Council claims there will be less games-playing in the next RAE. But, as Sir Howard knows because I have said this to him, there will be at least as much, if not more, games-playing in the next Research Assessment Exercise as in this one if the current rules are not changed. There is one provision at the moment which is going to generate a lot of games-playing and that is the decision by the Funding Council, at least for the moment, not to publish any statistics on the proportion of staff being submitted in the next Research Assessment Exercise. Now, if the Funding Council sticks to this decision, what will happen, and I know from my colleagues that it is happening, is that all institutions will be under considerable incentive to be even more selective in

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the number of staff that they submit in order to improve what might be described as their ‘grade point average’ and, therefore, to have a higher position in the league tables, which are a very important factor in the recruitment of high-quality staff and the recruitment of postgraduate students, in particular, from overseas. I am hoping that the Funding Council can be persuaded to change its mind on what sounds like a detail, but is actually very important.

Q39 Dr Harris: Can I ask Gareth Roberts and/or Lord May that if that is true, is the whole thing not a waste of time because if you have something which is so corrosive to the system that it not only undermines the faith in the system, but actually distorts the results, it may well be better not to do it at all because of the corrosive effect of both those issues, that it is wrong and it is seen to be not right?

Professor Sir Gareth Roberts: I think the important thing to mention is that if one introduces a tail this time around of people who are not doing high-quality research, it will not affect the funding one iota. In the previous exercise, if you put a tail in, that could have damaged your grade and you could have gone down from a five star to a four and that would have affected the finances enormously. Now that you can put in a tail which does not affect your finances, it is the pride factor, that is all, it is simply a pride factor, and, having had the three-track system rejected with a minimum submission of 80% of people which I had recommended, that is 80% of people with research in their contracts, I would go now probably for 100% submissions and try and include some post-doctoral people too who are on open-ended contracts who really are seen as contributing and leading the way in research. I do not think it is going to be as divisive as Ivor has suggested but I think there should be some real clarity on it, and it really is important to mention that funding now is not jeopardised.

Q40 Dr Harris: Can you understand why they do not publish the proportions then? If there is less of a problem, in your view, can you understand what they possibly have to hide by not publishing the proportions submitted?

Professor Sir Gareth Roberts: Well, I would be for complete transparency. I see no reason at all why one cannot submit everybody. It is a dual-support system and to me, for anyone who is eligible for applying to a research council for money, it makes sense that they should be included in the RAE.

Lord May of Oxford: There is a more fundamental point underlying this. Any system of distributing the money, whether it is the expert peer-reviewed direct costs of grants or the infrastructure costs, anything, other than just giving it out on a per-capita basis, needs rules. And the rules will govern behaviour. There is no way of avoiding it. There is an interaction between how we do these things and the behaviour we promote. The current system—there is no need to go into the details—but underlying it is one really big problem which is, because it evaluates

at the level of departments, it does demonstrably inhibit collaboration and indeed one of the things we want is to see a whole diverse, but connected, system of research councils, institutes, industry and universities, and this RAE that focuses narrowly on the bureaucratic end of it is a problem. The ultimate problem, however, is to recognise that you cannot get away from there being a game, unless you just give the money out per capita, so you need to think both of what you are trying to achieve and how to do it, and then to think very carefully about the unintended consequences of the games we play. One of the obvious consequences of doing this is what we see in the universities day by day, as the ratio of administrators to active faculty grows. It is not just the funding councils, but the universities themselves react. If you go back and contrast a university department of 30 years ago when people’s main activity was teaching and competing for research grants, and look at the amount of bullshit and paperwork which afflicts their daily lives today, it is a disturbing trend. That is why I so resonated with what Ian said right at the beginning, which is let’s do 2008 because it is difficult to see how we do not, but let’s right now, as we move towards that, be looking at the system in the round and putting forward really fundamental thoughts about it

Q41 Mr McWalter: Just following what Evan said and maybe taking a more aggressive line still, it seems to me that whilst people in the system can see that clearly some people who were not research-active have become research-active and some who were research-active have become more research-active, and that is really all very good, I think what Adrian Smith said was vital. I put it to you that the Research Assessment Exercise in the round has actually hugely damaged the system because a huge number of people have pushed their energies and activities into that area to be regarded as a proper academic and all of the other things that academics should be doing are much more marginalised, including many of the very important research activities, like, for instance, doing work on, say, how to get huge changes in developing countries or whatever because that requires four or five sciences to come together and no academic is going to spend their time doing that kind of work because it is intermediate technology or whatever. It seems to me in the end there is a whole host of areas which actually damage the system. Do you agree?

Professor Crewe: Chairman, I do not agree with that. I think that not only has the Research Assessment Exercise, despite its evident flaws, made a significant contribution to, and an improvement in, the research base of this country so that we are still second only to the United States in the quality of the research, but I do not believe that it has damaged the quality of the teaching or the interaction with business and the community. If the quality of teaching in British universities had been damaged, it would be very difficult to explain why we have been so successful in recruiting students from overseas and students from the rest of the European

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Union in the last ten years, and we know that the reason for that is not the research, but it is that UK universities still have an excellent reputation for quality of teaching.

Q42 Mr McWalter: And why science departments are closing in droves.

Professor Sir Gareth Roberts: I do agree with Ivor Crewe in disagreeing with Tony McWalter, but I think Tony McWalter has a very strong point about how you can help other countries, and I would like to think that in the ten-year science strategy which comes out this July, there will be more co-operation between the Treasury, DfES, OST, DFID and the Foreign & Commonwealth Office.

Q43 Chairman: But Bob May has made it clear that he wants to see and tends to envisage departments opening again, so is that going to be in the ten-year review, do you think?

Professor Sir Gareth Roberts: "Manpower-planning" is not a term we use in this country anymore, but it does seem ridiculous to me that we have hundreds more people doing sport science than production engineering, for example, not enough people doing

chemistry and physics and the reason these departments are closing at the present time is more to do, I think, with the undergraduates' loss of interest in the subjects rather than the RAE. People blame the RAE for everything.

Q44 Chairman: But you understand the correlation?

Professor Smith: No, I think we should be absolutely clear that really it is not a consequence of the RAEs. It is a consequence of the demand and the funding model which the Funding Council has for teaching income. I think it goes back to other issues mentioned by Gareth Roberts in his report on the supply of scientists and engineers and myself in my mathematics report that we have to get back into schools and look at the engagement of children in science and engineering.

Chairman: Well, we agree with that.

Mr McWalter: Chairman, could I put on the record that Bob May did nod in approval there.

Chairman: Yes, I have been watching the body language and we will publish the results of that independently! Thank you very much, gentlemen, for coming along and setting us off on this exercise and thank you for the work you have put in.

Witnesses: Sir Howard Newby, Chief Executive, and Mr Rama Thirunamachandran, Director of Research and Knowledge Transfer, the Higher Education Funding Council for England, examined.

Q45 Chairman: Thank you, Sir Howard. I have been watching your body language at the back there and we will publish the number of times you scratched your nose, felt your ears, shrugged your shoulders and smiled; it was very interesting! Thank you very much for coming in, and Rama too. I wanted to start off by asking you if you would like to make a statement and then we can give you some punchy questions.

Sir Howard Newby: Well, thank you, Chairman. I did indicate to your colleagues that I might wish to do that and I have got a statement here, but I think in view of the time, the ground which has already been covered and also looking at the body language of the Committee, you would probably prefer to get down to the questioning, so why do we not omit that.

Q46 Chairman: We are getting excited about Prime Minister's Question Time! Seriously, you will pick up the issues, I am sure. Let me ask you about this issue and let's be quite specific about this. We said, "This 2008 phenomenon, forget it, get all these other issues sorted out", but what do you feel about that? I guess you would welcome it in a way, would you not, from a work point of view?

Sir Howard Newby: Certainly from an administrative point of view, running the RAE reminds me a bit of when I was a student, working on the Christmas post. It is a huge spike in our administrative—

Q47 Chairman: You did not throw the post away, did you!

Sir Howard Newby: No, nor, as far as I know, have we thrown any submissions away, but it is a big administrative burden on us. I think, for the reasons you have just heard, the sector does require a considerable period of preparation and it would like to know what the rules are before it enters the competition, and I think also that we still have an open mind on whether we can reduce the administrative burden by making greater use of metrics, for example, and you might want to come back to that. On the other hand, I have been involved as a Vice-Chancellor in the last two RAEs and each one has always been predicted to be the last one, and the same might be said about the 2008 exercise. I personally find it impossible to conceive of a situation in which research funding, scarce research resources will not be handed out against some measure of performance, some assessment, but I have to say I have a completely open mind about what form that assessment should take beyond 2008. I think the more we can produce an efficient and effective way of developing performance-related research funding without unnecessarily burdening the sector, the better, and I have an open mind on that.

Q48 Chairman: In your reply to our report in 2002 you did not accept many of our conclusions, clearly, but there are going to be changes. What do you think of those changes?

Sir Howard Newby: I would summarise the present proposals we have put forward as trying to make the existing system of assessment work better, work

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more consistently across disciplines, and to give proper weight to research activities which are important for the country—and you have already heard some of those mentioned, practice-based research, applied research—and also recognise that different disciplines and different combinations of disciplines, quite legitimately, might be treated in somewhat different ways according to the weightings we give between basic research as evidenced in publications, for example, on the one hand, and more practice-based outputs on the other. So we try to make it work better. As you know, Sir Gareth's report did make some more radical recommendations and personally I have always hoped that we might be able to make some more radical changes in the assessment system but, for reasons we may wish to go into, the sector as a whole concluded that it would wish to see improvements in the existing operations of the RAE rather than scrap the RAE altogether.

Q49 Chairman: But would you not take up Bob May's position, perhaps, and say that you only have to look at the whole fundamental mechanism of research funding for universities and so on and put that into the pot as well and let's get it right, once and for all, because I think that upsets a lot of people in the academic community who say, "Here we go again. They give it with one hand, take it away with another", and it is very unsettling, but here we have the chance with the ten year review coming up.

Sir Howard Newby: I agree very much with what Bob had to say very much, firstly, about the commitment to the dual support system which I think has served this country very well, but again retaining an open mind about how that dual support system might operate in practice. We have had, the last time I looked, nine reviews of science and research funding in this country of various kinds in the last three years, and I think the sector is suffering a little bit from review fatigue on this. If I may, Chairman, I am not trying to be cute when I say this but I would just remind the Committee that in the end the RAE is simply a system by which the Funding Councils, all four of us, calculate the value of the block grant which goes to the university. It is for university managers, quite properly, to take the money we give them and invest where they see fit. They are under no obligation whatsoever to echo the HEFCE funding formula when they distribute resources internally. In fact, when asked, we always advise them not to because we recognise that circumstances vary so much between universities.

Q50 Dr Iddon: In your response to our 2002 report on the RAE, you rejected any criticism that we made. If it is not broken, why are you agreeing to fix it now?

Sir Howard Newby: Because we have taken on board seriously one or two of the criticisms that were made. If I may single those out, firstly there are issues about whether we were giving sufficient weight to research outputs other than the four publications and academically reviewed journals; whether we had managed the process sufficiently effectively to ensure

a degree of consistency across panels and their judgments; and whether or not the way in which the research assessments were being translated into the funding formula meant we were able to sustain sufficiently the very best world class research in this country against increasing international competition.

Q51 Dr Iddon: Bearing in mind the comment I made to the previous panel, that there is this big, disproportionate gap in the funding from HEFCE, research councils and all other sources of funding, can you see that the ten year science strategy that Treasury have announced will address that, or not?
Sir Howard Newby: It is certainly addressing it. Whether it will close that gap, of course, is dependent upon the spending review decision, and no one knows what the outcome of that will be.

Q52 Chairman: What do you think we need? How much?

Sir Howard Newby: £900 million. That is the size to which the gap has widened over the period to which Dr Iddon referred.

Q53 Dr Harris: On this question we had of games playing, although you say in the new system there will be less of a cliff and therefore less of an incentive for games playing to a certain extent, if anything that might make the tactical nuances more complex, with more energy being put in. Do you recognise that is a problem, firstly, and do you recognise that even if you do not think it is a problem, if it is seen as a problem, it undermines confidence in the system?

Sir Howard Newby: Yes, it is a problem, and we do recognise it and I obviously heard with interest what Professor Crewe had to say. I met recently a group of vice chancellors from the '94 Group of universities where we discussed this and let me say on the record that we have not taken a decision finally on how to register the proportion of staff who are submitted. Perhaps I could also say what the difficulties are here. The argument for putting 100% of eligible staff in is that, in our view, this might encourage staff who either are not particularly interested in undertaking research or whose talents lie elsewhere, for example in teaching. They would feel an even greater obligation to undertake research when—and I share some of the sentiments you have just heard—we need to do more to encourage teaching excellence to put alongside research excellence in our universities—

Q54 Dr Harris: Interrupting on that point briefly, research should then be in their contract. If they are better at teaching and better at doing other things, then research should be in their contract and then they would not count within that 100%.

Sir Howard Newby: But, broadly speaking, whilst research is a contractual obligation for staff in the pre 1992 universities, it is not a contractual obligation elsewhere in the sector. We do not want to encourage an unsustainable growth in research volume, because so many more staff who have previously been—I will not say "content" but who

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have recognised that their talents lie elsewhere—feel now an even greater obligation to undertake research. On the other hand, we have the problem articulated by Professor Crewe. I repeat what Sir Gareth said—this has no funding consequences under our proposals but it does have consequences if it is picked up as an indicator by newspapers in the publication of their league tables, because they have in the past taken, and will no doubt continue to take, in looking at their indicators a fraction of staff in a university who have submitted to the RAE, and they do use that as one element in the league tables, and the consequences of that may or may not damage the marketing of institutions when they seek to recruit staff and students, so it is a difficult issue for us. On the other hand, newspaper league tables are not the concern of the Funding Council, but we do recognise that from a university standpoint they do have real consequences.

Q55 Dr Harris: We are all afflicted by league tables. You just repeated what Sir Gareth Roberts said, and he was talking about including a tail of some size and I think you are saying that including any number as long as they were relevant would not affect the funding, but how do we know, except by taking your word for it, when you have not said what the funding consequences will be yet as a result of the assessments? In fact, you have not announced that yet so it is very hard for us as a Committee to say that, of course, you are right because we cannot see how that will translate.

Sir Howard Newby: What Sir Gareth was pointing out was that whereas, in the past, universities had to make a very difficult decision between, if you like, between volume and grade because the funding followed the grade as a single numeric summary grade, they no longer have to make that trade-off because the funding will be based upon the quality of the output across the board and will not be based upon a summative grade, so they do not have to trade off how many staff to put in for fear of losing a particular grade at the end of the day, or vice versa.

Q56 Paul Farrelly: But notwithstanding Sir Gareth Roberts' answer, he did say he would be in favour of total transparency.

Sir Howard Newby: So are we. Just to pick up Dr Harris' point, we are not hiding anything here.

Q57 Dr Harris: It was Ivor Crewe's point.

Sir Howard Newby: As I say, the arguments about whether or not we should have 100% entry are evenly balanced and whatever we come down with in the end we certainly are not going to hide anything. The information will be public, and we have been very committed as a Funding Council, and all the funding bodies are, to total transparency in the RAE, and I think on the whole the academic communities welcome that.

Q58 Bob Spink: Our 2002 report recommended that top-rated departments should, if they wished, use metrics for their assessment. Why did you not agree with that?

Sir Howard Newby: The issue is not whether or not they should be used. They are used, were used last time, and will be used probably more extensively this time because the metrics themselves have got more robust. The issue is whether we should move to an entirely metric-based approach, or whether the metrics should be used as part of a peer review process. The issue there is that, in some subjects, especially in the science and engineering field, metrics are robust, and we certainly intend to guide the panels towards using those metrics as far as they can and also reduce the burden on everybody, but in some other subjects, and the classic ones are the arts and humanities, the metrics are not well developed at all, and are not a very good guide.

Q59 Bob Spink: Are you then saying you have six years to work at it, and within those six years you could not correct those metrics you feel are not sufficiently robust?

Sir Howard Newby: We can certainly correct them and improve them over that six year period but given the average length of a research project is three to five years there are some huge lags here, so what the community is looking for now is an indication of what metrics we intend to use, even though it is five years' hence.

Q60 Bob Spink: Even though research does take a long time, still each year you will get a number of research projects coming to fruition, so you need not wait for a complete generation to work its way through in order to improve the way that the metrics are generated and reported, and their rigour?

Sir Howard Newby: No. I repeat we will do all of that and we will be offering guidance to the panels to use metrics wherever they can, provided we are all satisfied that those metrics are valid.

Q61 Chairman: This has not started yet, any of this, has it?

Sir Howard Newby: As you have heard, we have been doing some pilot studies on developing the metrics to make sure they can be as robust as possible.

Q62 Chairman: But there are no conclusions at all?

Mr Thirunamachandran: Let's be clear; there are three sets of metrics which we have used in the past, and will continue to use in the future—research grant information, publication information, and post-graduation research unit information. What we are talking about is ensuring that those metrics are collected as well as they can be and are consistent across the piece in particular cognate subject areas, and then looking at other metrics, particularly in the science, engineering and technology areas, to see whether there are other metrics which could help us even further, and in the case of applied research and practice-based research we think they can.

Q63 Bob Spink: The use of benchmarks to compare and manage and control and organise and plan is not unique: business has been doing this for years and years. It is one of the first things you learn at

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business school. I am surprised that there should be this inertia in academia on this. Sir Howard, you said it was impossible for you to conceive that there would never be any measure of quality in determining the distribution, and you said you were open-minded about what measures should be used after 2008. What I cannot understand is what can we achieve in eight years that we cannot achieve in six, ie for 2008. I do not understand that inertia, that gap of time.

Sir Howard Newby: We are talking about very large sums of public money here, over a billion pounds for England alone, plus money for Wales, Scotland and Northern Ireland, and that goes to vice chancellors and their senior management teams to invest in their future research business. They are making investment decisions now on where to invest in their research activity, where they think they can get the greatest return in terms of the knowledge created, which I have to say do have lead and lag times of five to ten years. We are now looking at the investments in some key areas of science that were made ten, twenty years ago. So the leads and lags on this are enormous, and you have heard from vice chancellors that what they are looking for is a degree of planning certainty so they can make the investment decisions in a rational way on the understanding that things will not be turned upside down halfway through, and I sympathise with that view.

Q64 Bob Spink: You did not like Sir Gareth's three track approach idea. Why?

Sir Howard Newby: The argument against it was it was going to produce a degree of complexity from the point of view of institutions which they felt, at this time when we are all concerned about the burden of bureaucracy, was going to be too much. I have to say I do share some sympathy with what lay behind Sir Gareth's proposals. We also wish to arrive at a situation in which those institutions which receive very small amounts of core research funding from us could be treated rather differently from those who receive very large amounts. The smallest amount of money we hand out through our QR, the quality research part of the block grant, is £38,000 a year to one university. My delegated powers as chief executive of the Funding Council are £2 million a year. I could have written them a cheque for £38,000 without putting them through the full rigours of the RAE, but when we came to consult there was a very strong outcry, from even those institutions which were not strong in research, that they had, if you like, almost an entitlement to be entered for the full RAE, and this was really to do with status rather than money.

Q65 Chairman: What do you think of OFFA taking over functions that you could well undertake?

Sir Howard Newby: I do not like it, Chairman!

Q66 Chairman: A waste of money?

Sir Howard Newby: I think the policy is absolutely right and one I fully and wholeheartedly support. Whether we need a separate organisation to look after it, both I and my board have severe doubts about.

Q67 Paul Farrelly: One of the concerns here and what a lot of the detailed questions have been going on about is the tweaking of the research assessment exercise of 2008, and this is clearly not happening against the background of the status quo. There are two big changes that are coming: one is the view in the White Paper of the future structure of the universities, right or wrong, and we will see how that develops, and, secondly, the repositioning by the universities themselves with the introduction of variable fees. How do you see the research assessment exercise taking into account these potential developments and adapting, and how do you see it adapting to the background changes?

Sir Howard Newby: If we were in a situation in which we line-item budgets for universities and say, "You have a little piece of money here for your chemistry research and a little bit of money here for this research and a bit of money here for that teaching and for admin", this would be a very serious matter indeed but to repeat, in the end, when all is said and done, the money goes to the universities as a block grant, and they manage that money in what they judge to be their best interests and they can and do move money around between different headings—between teaching and research, different kinds of research and teaching and so on—and if they did not have that flexibility the higher education system in this country would be very much the poorer. When we look at the impact of the consequences of the Bill in terms of the variable fee regime, they have the flexibility to move money around from us as it is, we do not need to give them more flexibility because they already have it, and since 92% of our allocations go out as a block grant and we only retain 8% for special initiatives, I do not think that the RAE itself needs to be looked at in relation to the provisions of the Bill.

Q68 Paul Farrelly: And what about the recommendations in the White Paper regarding the future direction and development of universities, particularly the research and teaching distinction?

Sir Howard Newby: There is a general issue here which is faced by all countries who are expanding their higher education systems towards what one might call a mass higher education system, as one might call it, and that is that, at the moment we fund up to 295 institutions, not all of them universities, can we as a nation afford not only to expand and move beyond a 50% participation rate in terms of students but also to expand at a commensurate rate for funding research in those institutions as well, and I do not think there is any country in the world that is doing that. All countries are recognising that, one way or another, as it grows it will become more

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diverse and some institutions will focus—and I use the word “focus”—on some aspects of the higher education mission more than others. It is not part of my Council’s agenda, and I do not believe it is part of the government’s, to have so-called “teaching only” universities, but it is part of our agenda to encourage institutions to identify their strengths and focus on their strengths and, as the Committee will be aware, we have also changed the way in which we support universities to attract and retain students from poorer economic backgrounds to meet some of the real costs of doing that, and those institutions which do well at retaining those students now are rewarded quite considerably for doing so.

Chairman: That is a familiar line, I think, for some of us.

Q69 Mr McWalter: Twice you have portrayed this hands-off HEFCE line which says, “We give you the money as a block grant, do what you like with it”, but a vice chancellor with a 5* physics department who has a block of money because that department exists would be a lunatic if he did not then give most of the money that has come in in recognition of that research excellence in order to make sure it also gets him that block of money next time. So the reality is that, however hands off you are, your decisions are in fact mirrored in universities and equally vice chancellors, and this is a point I have made before, are constantly closing departments because they are not bringing them in those blocks of money, hence we are losing chemistry and maths and physics and engineering from university after university. Do you not accept some responsibility for all of that?

Sir Howard Newby: Yes, of course I do, and we will come on to the issue of provision of science subjects in a moment, and I am concerned as you are about that, but dealing with the block grant principle first, I said earlier we are a transparent organisation committed to transparency, and therefore it is true that any member of any higher education institution can quite easily work out by going on to our website how our block grant is calculated, and therefore, if you like, what they believe to be their entitlement on the one hand whilst on the other hand we are very clear that we do not line-item university budgets—nor do we wish to, by the way. Now, that does mean that there are institutions which echo the HEFCE funding model internally, but whenever we are asked we say that really they should not; they should use their resources according to their own priorities. Moving on, though, first of all, we share your concern. The fundamental issue here is falling student demand. What supports good research departments is their teaching income, and that teaching income comes on the basis of student recruitment and retention. The figures are that in chemistry the number of departments in England—I obviously cannot speak for Wales and Scotland and I know there is a particular issue in Swansea at the moment—has declined from 59 to 55 between 1996 and 2003; the number of physics departments has declined from 51 to 38, and the number of engineering departments from 63 to 61. The vast bulk of those closures, and there are one or two

exceptions, have been in Grade 1 and 2 RAE categorised departments, and they have also been in very small departments, so this is where vice chancellors have been, as I said earlier, taking their investment decisions to invest in areas of growth, and disinvest from areas of—

Q70 Chairman: I thought the RAE did not drive these closures. I cannot remember who said it but it is in my head that somebody said that this morning. Am I wrong?

Sir Howard Newby: I do not recall anyone saying it this morning.

Q71 Chairman: You are quoting Grade 1s and Grade 2s as a factor.

Sir Howard Newby: I am indeed. I cannot recall it being said this morning but if someone has said that to you I am just reporting, if you like, the facts to you. Now, at a national level we might say that 55 chemistry departments and 38 physics departments would be sufficient to service the national need. The problem in my judgment, and this applies to engineering and mathematics as well, by the way, and also to modern languages, is the regional dimension of this. At the regional level, because these closures have been unco-ordinated, unplanned and somewhat random, there are some difficulties. There are no physics or chemistry departments in the eastern region apart from the University of Cambridge and the University of Cambridge, as we know, is not a university which most students can get access to and there are comparable examples elsewhere. To remind the Committee, the Funding Council does not have planning powers but I would certainly accept that we as a nation need to take a more co-ordinated approach to this, so that access to maths, physics, chemistry and engineering provision is available to those students who want it and who can benefit from it, and I am worried at the present time that the rather unco-ordinated nature of some of these closures, even though vice chancellors are acting perfectly rationally, may when you look at the system as a whole produce an effect which is not in the national interest. What do we do about this? In the long term the answer will be to work on the demand side, and we have been running a pilot scheme with the Royal Society of Chemistry in three parts of the country which we are encouraging the Royal Society to roll out which involves university departments, employers working with schools and school children ages 13, 14 onwards to almost sponsor them through “A” level and beyond. There are some encouraging signs of that and if it does work well we want to look at operating similar schemes with other bodies.

Q72 Chairman: Time is running out for that.

Sir Howard Newby: It is but I repeat that the fundamental issue is falling demand, a one third decline in chemistry student applications in four years. In the meantime the question is how to sustain provision, especially on a regional level, in the absence of student demand. That is the key issue and I repeat that we have at present no powers to

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intervene and say to vice chancellors, "You must keep your chemistry department open". We do not have planning powers. Unlike the Learning and Skills Council which has an adequacy of provision clause written into its Act we do not, and I think there is something there that should be examined, frankly.

Q73 Dr Turner: Can I briefly ask you about the assessment panels? Will you be making extra resources available to them, and will you give each panel a moderator?

Sir Howard Newby: The answer to the first question is yes. The word "moderator" is one which is a rather sensitive term to use in other parts of the United Kingdom where it has a certain history, as the Chairman will recognise, but the honest answer to your question is also yes. We do need to ensure greater consistency with the panels, and we also need to make greater use of authoritatively international referees and make more use of their time.

Q74 Dr Turner: I was just going to ask about the involvement of user community and overseas members, and how you stop them being seen as tokenistic?

Sir Howard Newby: We have to stop them being seen as tokenistic by involving them more in the process than they were the last time.

Q75 Dr Turner: How are you going to get consistency across disciplines when using metrics, when you are going to have to have discipline-defined metrics, and you cannot use the same metric across all disciplines?

Sir Howard Newby: We are never going to get total consistency. Peer review is a human process and therefore fallible. I would certainly wish to reduce what one might call the standard deviation between and across panels. I would like us to aim for a good deal of consistency in clusters of disciplines, although recognising that when one tries to compare, say, the judgments made in physics with the judgments made in art history it is very difficult to make an exact comparison.

Mr Thirunamachandran: And hence, as Sir Gareth said, the two-tier panel structure is designed to bring cognate subjects together under larger main panels.

Q76 Dr Turner: Finally, a main part of previous RAEs has been the publications, the citation index and so on. Is this the only way in which the panels will be assessing the potential impact of research, or will you be looking at wider ranging impacts of that research?

Sir Howard Newby: We are looking at wider ranging impacts.

Mr Thirunamachandran: Panels in the past and in the future will continue to receive information in what are known as forms 5 and 6, those which were involved in the previous exercise on RAE, to provide a range of information about participation in international activity, whether it be conferences or collaboration with industry. All that information

can be provided as part of the submission, so there will be a wider range of information than just publications, grants, and this kind of student data.

Q77 Dr Turner: But how will you attempt to measure that, because it is very difficult to foresee the impact in future research developments which are enabled by a piece of research and, likewise, the possibilities in the innovation process?

Mr Thirunamachandran: Ultimately I guess it comes down to panel judgment and there is a time lag, as has been said previously, but within those constraints I think the panel will be guided to do their very best to look at the impact it is having on a particular area of policy, or a particular innovation in industry.

Q78 Chairman: Lastly, Sir Howard, if you and I were to put ourselves in charge of a department who have been through it, I do not know the rules of the game now and I might not want to play it any more. Why should I play it differently, because I could always stay as a 5 or a 5* without moving, without putting the whole department under this aegis of paperwork and so on. How would you encourage academics to play the game any more?

Sir Howard Newby: Having been, like you, a former head of a department, I think the rules of the game of assessment are known, but what is not known is how that translates into cash.

Q79 Chairman: Why play it?

Sir Howard Newby: I cannot sit here and say "I know how much cash we are going to get to hand out", nor do I know what level of improvement or deterioration in performance there will be as measured by the next RAE, and those are two key variables we do not know, and cannot know in advance, although it would be nice to know how much money we would have to hand out. As you know, what happened last time was that the performance improved to such an extent that the commensurate resources were not made available to fully fund it.

Q80 Chairman: Is there any other institutional complex you look at in this country and say, "Gosh, I wish I ran them; I wish I knew we had the money before we started playing this exercise"?

Sir Howard Newby: I think this is common across the public sector. Spending reviews these days occur on a two-yearly cycle and funding for three years with the third year left uncertain because it is going into the next spending review, and whilst all of us, myself included, from the Funding Council wish to have a greater degree of planning certainty further into the future, especially in a long-term game like higher education, practically we do not have it and, given the nature of electoral cycles, probably never will.

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Q81 Chairman: But you do not think the institutions you seek to support and help are different from the Health Service, for example? If I was running a hospital I would know exactly what I needed and I would know how to get it.

Sir Howard Newby: In terms of the question you have asked, if I was a manager of a major hospital and if I was a vice chancellor I would also like to

know what my reliable funding streams were going to be for more than three years in advance in both cases because, again, of the long term investment decisions one has to make, both in people as well as buildings.

Chairman: I think we have heard you say that many times before! Thank you very much for your evidence today.

Monday, 7 June 2004

Members present

Dr Ian Gibson, in the Chair

Paul Farrelly
Dr Brian Iddon
Mr Robert Key

Mr Tony McWalter
Dr Desmond Turner

Witnesses: Ms Natalie Fenton, Senior Lecturer in Communications & Media Studies, Loughborough University, Professor Ian Haines, Director of the Graduate School, London Metropolitan University, Dr Steve Wharton, Senior Lecturer, Department of European Studies and Modern Languages, University of Bath, and Professor Richard Joyner, Dean of Research and Graduate Studies, Nottingham Trent University, examined.

Q82 Chairman: Thank you very, very much indeed for coming. Welcome again, Natalie. We visit the same subject, but I am sure you have studied all the changes that are being proposed so we do not perhaps have to go into as many details, but we certainly will ask you what you think of this idea now. Let me start by asking you this: do you think that in research assessment we need radical reform or a real revolution? Natalie, that is your type of question.

Ms Fenton: You know, there has been such a massive change in culture because of the RAE that it now governs absolutely everything, in my view, that goes on in institutions. To tinker with it—and I include that in radical reform terms—if you play around with changing the rules slightly, you will still get people trying to interpret those rules in all sorts of ways, so you will never get away from a game playing, because it has just become one big game. It is a big game that everybody has to engage in; you cannot opt out of that game. So I personally think that radical revolution is—we need to draw breath. We need to step back and say, “okay, let’s have a complete overhaul or a complete refreshed look at the whole funding of higher education”. You cannot judge the RAE outside of looking at the funding of HE. We need to step back and ask how we are going to do that. To reform simply means that people constantly second-guess what those rules are going to be. It does not look from the Roberts report and the interpretation of that, that actually it is very clear what that is going to be yet for the next round; so already you are getting people jumping the gun and doing all sorts of ridiculous tactics and antics to try and interpret what the rules might be when they finally are public. I think we have to stop and have a radical redress of HE funding.

Q83 Chairman: What about your compatriots here; are they into revolution or are they reformists by nature?

Professor Joyner: I very much agree with Natalie, and I think that one has to look at what is happening. If one looks at what is happening in science and technology in particular, I think you can make a case that the RAES have an even more severe effect than it has on the rest of the academy. You talked with previous witnesses, Howard Newby, Gareth Roberts and Robert May about the decline

in science and technology departments, and they seemed to say on the one hand that the RAE was not responsible for it; and on the other hand that it had a contributing part to play in that. There is no doubt in my mind that it has a contributing part to play, and that probably “we aint seen nothing yet”, because what has happened as a result of the 2001 financial settlement is that you now have an insurmountable entry barrier to anybody who wants to get into research in science and technology, and you have a big exit penalty. Once people fall off the RAE treadmill, once they seek to get an adequate level of funding from the RAE, then they are not going to try and get back to it again. What we are seeing is a decrease in the number of science and technology departments, which is being driven by a range of factors, but not least by the RAE, and it is clearly going to get worse before it is better.

Q84 Chairman: But hang on, Richard; you may lose a chemistry department here and there, but you get a sports science department instead. Is that not a great step forward in the brave new world?

Professor Joyner: I have nothing whatsoever against sports science departments, but I think the contribution they make to the knowledge economy is of a different class to that which you expect from a chemistry department.

Q85 Chairman: What use is a sports science department?

Professor Joyner: The use of a sports science department is clearly to provide a higher education experience to a lot of people who want higher education experiences in sports science. In that sense, arguably, it is no different from an English literature department or—

Q86 Chairman: That does not really tell me what use it is to the nation, does it? It does not give me gold medals; it does not give me the Olympic Games; it does not give me a decent Scottish football team! Come on, what do they give?

Professor Joyner: I think on behalf of sports science departments I am quite tempted to plead the Fifth. I know very little about sports science. It is not an area in which I claim knowledge or expertise.

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Professor Haines: I think, Chair, you are being a little bit unfair on sports science departments, and so is Richard. There are areas of sports science, in sports therapy, in supporting people in getting fitter and healthier when they have had illnesses, and very interesting research goes on in that area. I think that the point Richard may be making, and I would certainly want to make, is that we cannot afford to have certain sciences disappearing in universities partly because of the Research Assessment Exercise and its effect on anyone that does not get a 5 or a 5*, and partly on the basis of student choice. There has got to be some overall control of this kind of thing. If I could just throw one other point in at this stage, HEFCE has spent a great deal of money on a restructuring fund—tens and tens of millions of pounds. I do not believe anybody was taking account of the overall effect of that. Individual universities could make a bid to that restructuring fund, and they could restructure any part of their institution. I have tried to understand in the HEFCE publication what was happening; and where they name subject areas, the subject areas which were being rationalised were generally the physical sciences.

Q87 Chairman: Do you think that all universities should have basic core subjects within them to still be called a university?

Professor Haines: Yes, but I would not want to take that too far. I would say that if the local university does not offer science and technology, pupils in the local schools and colleges will believe science and technology does not matter. But that does not mean that every university say in London should be offering every scientific discipline. You have to be sensible about this.

Ms Fenton: I think there is a real argument for taking that on a regional basis for student intake; so that in a region you have to have a core coverage of subjects. I am sure you have had this evidence already, but since the first RAE the number of chemistry departments has halved; it has gone from 68 to 34. Just since the last RAE, it has gone down from 34 and we are now at between 28 and 30. The Royal Society of Chemistry believes that all grade 4 departments will cease to exist after the next RAE. When you get to that level of detriment to a subject area, you have got to draw breath, and say, "this cannot be right".

Dr Wharton: I entirely agree with what all of my other colleagues have said. I think the regional issue, which is one of the things that was highlighted in the Education White Paper, is a way of redressing that question of subjects across institutions. When it comes to the RAE itself, RAE 2008 should be delayed. A line needs to be drawn and we need to think quite radically about the way in which higher education is organised.

Q88 Chairman: We will come back to that later on, and the potential for delaying it. We have the dual funding process, which everybody basically wants to keep going. Do you think, in an ideal world, if the anomalies were straightened out in terms of

discrepancy in funding and so on, and 900 million came into the system somehow, that you would need an RAE; or do you think you will always need an RAE? Natalie, you were suggesting tinkering.

Ms Fenton: I do not think we always will need an RAE, but I cannot imagine a government turning round and saying that we cannot have some means of accountability that has sticks and carrots attached to it to ensure that we are getting good value for money from our research system. I think that if we were going to do an overhaul of the system, then the amount of funding that can be differential between departments should be reduced dramatically; so every department gets a basic research funding, and the difference between whether you are graded four stars, three or two, is only 20% or 10% even of the funding. That would dramatically change the amount of effort people put into playing the system. That sort of radical change would be important. I also think, in terms of the overall issue of funding and looking at the dual support system, one of the biggest dangers to research funding at the moment is the proposal that all research funding should be completely—all costs should be completely met. That would mean that most places would not be able to do research at all. Even the Government does not meet the full costs of research in institutions. The research councils do not meet the full costs. If we have to recoup full costs every time, then there will be hardly any institutions that will be able to do research, and I think that is a massive danger.

Q89 Dr Iddon: I just wanted to pick up on Natalie's comment that there are only 34 chemistry departments. The Government is quoting anything between 75 and 83, which is ridiculous, and the Royal Society of Chemistry, of which I must admit I am a Fellow, is quoting somewhere in the region of 53. I have never seen a number as low as 34, so if you have any evidence for that, I am sure the Committee would like to see it.

Ms Fenton: Yes, sure.

Q90 Dr Iddon: That is not the question I was going to ask you. Whenever we have gone round this carousel of closure of science departments, ministers, Sir Howard Newby, Robert May, whoever you pose the question to, come back and say, "ah, but, two things: first, students are not opting to do chemistry, physics or mathematics; and, secondly, instead they are opting to do other sciences." It is not as if science is losing students; they are just shifting to astronomy or the life sciences in general. That is what they are saying; it is not what I am saying. The question is really, do you think that students ought to be given a completely free choice of subject at university, or should there be some guidance in the nation's interests?

Ms Fenton: I think there are ways and means of encouraging certain subjects within a student body. To maintain a degree of economic competitiveness in key areas, then there are ways in which schools and universities can do their bit in promoting subject areas more readily. Student demand is a factor in

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departments closing, but that will change over time. It is going to be almost impossible to re-start these departments as demand shifts. In twenty years' time, if suddenly there is a big loud, "come on, let's all go and do chemistry", it will be, "where are we all going to go?" There has to be a way in which universities can continue doing the research in those areas and ride a tide of fashionability as these things come and go in demand. That is always going to happen. We will suffer dramatically as a nation if we cannot sustain key subject areas throughout those periods.

Q91 Mr Key: In his review of research assessment, Gareth Roberts said it was time to get away from a "one size fits all" approach to this. He recommended a three-track approach to it. Sir Howard Newby said he had some sympathy with that. Do you?

Professor Joyner: I must confess that I do have a degree of sympathy. I think the idea that the university has to be entered into the RAE to have a spectrum in research at all has acquired a certain macho thing about it, and no vice chancellor is willing to say that they were prepared to accept the other two tracks that Gareth proposed. I think they were wary, particularly about the second track, the so-called light touch, about how it was going to work, and associated with each of them were questions of funding; that you could only have the three-track approach if there was some indication that by going in for the second and third tracks that you got a chance of generating any income at all because the fear was that based on what happened last time round lip service would be paid but no cash would be forthcoming.

Dr Wharton: The problem with the system was that it would have almost re-established itself by the back door, and the old pre/post 92 sector would have re-established itself by a different way. I must agree with Natalie that the best way of dealing with this question of the funding is to look at the proportion which is actually determined by the start-up, that essentially research funding should go to all institutions, and that the proportion which is divided up on the basis of some research assessment exercise, however it turns out, should be a smaller one than it actually is at present.

Ms Fenton: The minute you start to say to people, "you do not have to go into a certain track; you can opt for a different one" means that you will get a graded system where you will hugely increase the funding differentials that exist already for research. I do not happen to think that that is in the interest of the nation of higher education at all. We have to move towards a system where absolutely everybody is entered into the RAE who has research in their contract. That is the only way in which you will prevent people being excluded and harassed and bullied and all the other things that come with that, and their career stymied because of it; but also whole departments being seen as lesser and lesser research in all sorts of ways, when actually they are not lesser departments. Some grade 4 departments are doing really good research. They are just doing it in a different way maybe from the way the grade 5* departments are doing it. If we insist on having this

system where somehow this criterion of excellence is pinned on to some and not on to others, then we are always going to be in a position where exclusion will result in massive funding differentials, and hence a complete undermining of 80% of research that goes on.

Q92 Mr Key: You are saying we just need one mechanism that everybody dives into.

Ms Fenton: I am saying that nobody should be excluded. In my view, everybody who has research in their contract and who is teaching in university is doing some form of research, and we should insist that everybody is put in to the research in the same game, so that there are not three strands.

Q93 Mr Key: Lord May says that there should be more than one assessment mechanism in order to encourage diversity.

Ms Fenton: There should be the same formula between panels, but actually panels should be allowed to interpret that according to their subject area.

Professor Haines: What is difficult is finding a way of comparing pure research, real intellectually stimulating academic research as some people would describe it, with applied research, and having them on an equal footing. That is something that each RAE so far has failed to do. We are promised that it will happen next time. I certainly do not believe it will. In statistics last time, it was made absolutely clear before the RAE took place that applied research was going to be taken into account. It was very evident at the end of the day, with the results that were produced, that it was not taken into account at all. If you talk to members of the RAE panel in stats and OR, you would find that they will admit that they dismissed applied research totally. There is this snobbery, this snob value about intellectual academically stimulating research, which gets the highest number of citations in certain journals, as if that is the most important and the only thing that should be supported.

Q94 Chairman: Who are the snobs?

Professor Haines: I think that they—do you want me to name them?

Q95 Chairman: Yes!

Professor Haines: We create a snobbery about it. We create a notion that if you have not, for example, published in these particularly important journals like *Nature* that you are not doing something important. Those who publish in *Nature* are often doing something which is recognised by a very wide range of people. Some of the greatest breakthroughs are to be found in much lesser journals, where people are working in a very specific branch of science and technology. They are often missed.

Q96 Mr Key: Science is an international subject. Do you believe that the British assessment system is doing the country down, and can you name another country where you think they have got it right?

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Professor Haines: It is not doing the country down in terms of producing some high-quality research. Whether it is the right research, time will tell, because research today may not be clearly seen to be useful for quite a long time. In terms of the energy that people put into it, it is doing the country down.

Mr Key: What about another example of a country that has got it right?

Q97 Chairman: How about the United States, our shoulder-to-shoulder allies?

Professor Joyner: The advantage that the United States has—and this is relevant to the dual support system—is that there is a whole range of different places where you can go to get something. There is government, there are States; there are lots and lots of charitable outlets and so on, so the thing that we should be looking for is the greatest number of funding streams that we can possibly imagine. The effect of the RAE is neither as straightforward as doing the country up nor doing it down. In terms of citation, you can argue that it is doing us good, which is not a bad thing, but where you can also argue that it is doing us down is driving people towards good but relatively safe science. People feel that they have to have their publications in *Nature* or whatever it is, but very few people feel that they can take two years off to think about a serious problem which is not necessarily going to give them something that they can publish for two or three years after that. The effect is more complicated, but there is a significant downside to it.

Q98 Paul Farrelly: As we are talking about diversity and lastly snobbery, clearly this discussion of the RAE 2008 and the institutions positioning themselves for it, is not taking place against the background of the *status quo*. It is not a vacuum; there are other developments in the sector. There are ideas which were not debated in the Higher Education Bill about teaching and research institutions that are yet to be fully explored. It is also particularly against the background of the institutions positioning themselves for fees and marketing. How do you see the interplay of the RAE and that re-positioning? Is it, for example, going to reinforce current trends so that people will say, that you will only do decent science in institutions that already get the lion's share and will be able to sustain higher fees and therefore fund themselves better? How do you see the two interplaying?

Ms Fenton: There is a massive interplay between the two. You are going constantly towards this further narrowing down of research concentration into a few institutions. Those that can get the high RAE scores will be able to attract in more overseas students—because that is what we all need now to get in the higher fees, which everybody is going mad about; we have to get in the overseas students. Those that get the high grades will get the overseas students and be able to sustain their whole institution in a much more outwardly profitable way. Those that do not will not be able to get any overseas students and will be trawling through the home student market. They will not be able to charge as high fees as all the

others. The whole differential fee debate has completely plugged into further narrowing down that research base. The two go hand in hand.

Q99 Paul Farrelly: Do other members of the panel agree with that?

Professor Haines: Yes, I do. I would make another point, which is that there is a social issue here. If you use the RAE as some kind of measure of research success, which I would argue against completely—if you look at the top five or ten universities in any RAE league table, and then look at the bottom five or ten universities, you will find that the percentage of children going to those universities from social classes 3, 4 and 5, is three or four times bigger in the bottom group than in the top group. The proportion of students going from state schools into that top group is enormously different to the proportion going into the bottom group. These are often people who are already socially or educationally disadvantaged, who are then in danger of going into a university where, if the RAE goes to its logical conclusion, will not have an experience of research at all when they are studying for their degrees.

Dr Wharton: There is a further knock-on effect in terms of the students' experience of the teaching environment. If you have essentially very high-powered researchers who are driven by that research ethos, they will be using their postgraduate teaching assistants, or they will buy out their teaching. Therefore, if you go to an institution because it has an enviable research reputation so that you can be taught by the people who are leading in the field, you might not be taught by them directly and it will be at least one removed. The idea that the teaching is informed by the research is watered down through that kind of effect.

Q100 Dr Turner: In the last exercise there were concerns about the effectiveness and the validity of some decision-making in panels. Are you happy with the proposed structure of the panels and the sub-panels for the next round? Do you think they are adequate?

Professor Joyner: Some of it is very strange. They clearly had quite considerable trouble trying to work out precisely what constitutes social sciences and how social sciences should be assessed. There is a specific concern, for example: Ian was talking about different types of pure and applied research and there is a concern for example that people such as criminologists who do research that is designed to inform social policy have nowhere obvious for their research to go, and that it is not going to be treated with the seriousness that it deserves.

Dr Wharton: Another example is in the area of development studies, which in the past has tended to be regarded as being a sub-set of economics, but under the new system the sub-panels themselves may not have further sub-panels, so the ability of an economics panel to pay proper attention to the field of development studies is again severely limited. The good thing about the idea of having the super-panels and sub-panels with vice chairs who will go across sounds a good idea in theory, but you are going to

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have to have vice chairs of panels who have an incredible breadth of knowledge in order to enable them to view across that and to ensure that the same kinds of discipline-specific criteria—

Q101 Chairman: Academics do not have that breadth of knowledge, you are saying.

Dr Wharton: I am saying that in certain cases—it depends on the make-up of the panels, but if you look at the panel which is grouping from, say, European studies through Iberian studies, French studies, German studies and so on and so forth, I know very few people who are as plurilingualistic as that, for example, to enable them to drill down in that way.

Ms Fenton: It is also still difficult to see where truly inter-disciplinary work can go. I have a real worry about the inclusion in the latest details of research users on those panels. I do not really see—and there is no advice at the moment—how that is going to be regulated. Will they have the freedom to make judgments on all types of research, or it will it just be research that is directly applicable to business and industry; and how come they can come in just for the odd meeting and not have to sit through the whole assessment process? I think that is actually a fundamental difficulty because they could sway things without having an understanding of what has gone before. Why should they be there anyway? There is plenty of other ways in which we are measured on our contacts with industry and our relationships to business. This is not the place to do that. This is about the intellectual quality of the research that goes on in our community. Research users should be excluded entirely from that process. They are not peer reviewers; that is not their role. I also think that the role of chairs of panels and sub-panels is hugely onerous and can have massive come-back on the people who take on those roles. The people who chaired panels last time got massive recriminations for giving grade 4 to certain departments. Here am I, as a senior lecturer, who should be thinking about doing those sorts of things in the future, but you have got to be joking! There is no way on earth you would get me on an RAE panel because you are vilified within the research community unless you are so high up that you are almost untouchable. They are not going to bring other people on; you are going to get the same people, who will become very stuck in their ways, staying on there for ever, and you will not get other people doing it because it is hugely onerous and damaging to your own personal career route to sit on them.

Q102 Dr Turner: Clearly, the answer is that you are not happy! There were also criticisms before of the involvement of international representatives on panels being somewhat tokenistic. Do you think they have a useful role to play and, if so, how can they be made effective?

Professor Haines: I think that this one is very difficult. If you have a small number, because the task will be very onerous I fear that there is a danger that there will be special pleading. Who is going to be

chosen? They are going to have a limited knowledge base and there is a very great danger that they will direct their views in certain areas. If you want to solve that problem, you need a rather large number, and that is likely to be very unwieldy. I believe we should accept at the point of carrying through an RAE that our research is as good as international research in other places, and allow our own experts, be they snobs or not snobs, to make decisions.

Q103 Chairman: Would you like to pass this list of snobs on a piece of paper? I am fascinated.

Professor Haines: You had one or two of them here a few weeks ago and you were talking to them then.

Chairman: We will give them the right to reply.

Q104 Dr Turner: Clearly, you are not very happy about the panels, period. Do you think you would give them any greater resource? Do you think if they had more administrative back-up that they would perform any better, or would they be worse—good money after bad?

Ms Fenton: I do not want to come out as if I have a complete down on panels. I think there are real difficulties in certain factors of the panels. Any support you can give them, so that they can function better and feel that it is not such—it completely overtakes those people's world for quite a substantial period. These are the people who actually we would quite like to be doing research. Their lives are taken over by being a panel member. Okay, you get to a certain level in your career and think you should be doing more administrative duties, but they deserve a level of support if we are going to take it seriously. Of course they should be given more support; they should be given as much as possible.

Professor Haines: If the main panels are going to do their job properly, they need a huge amount of time for it.

Ms Fenton: Absolutely.

Professor Haines: Especially if inter-disciplinary issues are going to be properly taken into account, because they are inter-disciplinary within a main panel but they are inter-disciplinary across all the main panels. It is a huge task.

Q105 Mr McWalter: I would like to do more on snobs really. I think it is at the core of the business because you are producing a negative valuation of what some people regard as most important research, and yet we all know—my own background field is mathematics—that there are not many people who could have solved Fermat's Last Theorem or produced Goedel's Incompleteness Theorem. Those achievements are powerful for hundreds of years. Other people, again taking mathematics, are working, say, on fairly elementary matrix theory dealing with the effects of various factors in plant growth or whatever, and using a fairly standard mechanism, albeit applying it in an area where people have not applied it before and perhaps interesting and challenging and actually really important work, but nobody is going to claim that it is pushing back the frontiers. Most people are going

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to claim that that second kind of work could be done by quite a large number of people. That distinction is one that is etched into the system. The problem is, the first kind of activity potentially gets huge amounts of money and the second gets none. You are claiming, I think correctly, that there should be less of a steep cliff; but surely you are not going to deny the fact that the first kind of activity is hugely important and that we should fund it properly?

Professor Haines: Since I used the word "snobbery" first, I will agree absolutely with what you say. It is a balance that is wrong. Certainly I am not against what some people call blue-skies research, but we do need some kind of sensible balance. You were hinting that somebody has to do that non blue-skies, non wholly intellectually demanding work because it is essentially. I can think just of an example in my own institution where people are carrying out intervention studies in the poorest boroughs in London, trying to ensure proper nutritional status for pregnant women in the most deprived council estates. Okay, if there is a 5* Russell Group university in London that is going to do that, let us see them do it; and I do not think they want to do it.

Q106 Mr McWalter: Exactly.

Professor Haines: I do not think they should feel they ought to have to do it either.

Q107 Dr Iddon: What do you think of the proposals for handling joint submissions from different institutions? Is that going to crack the criticism of the view which is against collaboration of work between institutions and even between people in the same institution?

Professor Joyner: Probably not. The facility for joint submission has been there at least for the last two RAEs, and a comparatively small number of institutions have used it. I do not think the number of people who would use it will increase that dramatically.

Professor Haines: It needs a lot more thinking through in order to work properly. I hope that Gareth Roberts, or whoever is involved, has an opportunity to think it through a lot more, because it is an important issue, but it is not cracked yet. I heard that Howard Newby had spoken at one university about it, and it was clear that it is not clarified. It is not ready yet to be applied in a way that would be successful.

Q108 Dr Turner: What are your feelings about the way in which the panels will produce a quality profile? Do you think that it will be an improvement on the weighting system that we have had before?

Ms Fenton: It is very difficult to say until we can see the mechanics, the formula that goes with it. I think it is an improvement. I think it is better to have the quality profiles than having grading of 1-6 as we now see it. Institutions need to know as soon as possible exactly how that will operate. We do not know the formula. We do not know what it means to have quality profiles, so people are second-guessing all over the place. People have no idea what it is going to be, but they think they do, so they are already

doing all sorts of things to make sure they have the highest quality profile researchers in their department. I have never seen so many advertisements for chairs in the last six months; it seems to be a phenomenal amount of professorships suddenly being advertised. People are already trying to push people on to other related or teaching-only contracts, not because the RAE has said that that is how it is going to operate, because they have not; it is just because they think they know.

Q109 Dr Turner: Once they do know how a quality profile is going to be set up, then the game play really will start, will it not?

Ms Fenton: It will, and who can blame them? They are going to do that.

Q110 Dr Turner: Yes. Can you see any way of stopping the game play?

Ms Fenton: I think a massive way of stopping the game play will be by saying that absolutely every member of staff who has research in their contract should be entered. That will stop a large amount of buying in of big stars, and by reducing the amount of money that can be divided up for the differences between departments. I think you lower the stakes.

Q111 Dr Turner: It would not stop people being transferred to teaching-only contracts, though, would it?

Ms Fenton: That is a very difficult one. You would have to have a code of practice, and it will be critical for the next round to have a national code of practice that is laid down and which every institution signs up to, for how they administer the RAE process to get away from that, because that will be massively damaging to the system.

Q112 Dr Turner: We assume that the cumulative departmental profile will be made up from summing individual profiles. Do you think the profiles of individual researchers should be published?

Ms Fenton: No. I think it should be absolutely confidential. That could only be damaging. The problem is that people will guess that all the time and will say "I am a 4* researcher, and you are a no-starrer"—which apparently there is going to be. It would be hugely damaging because research goes in cycles as well. For one cycle you may not put out work that grades you on this apparent 4*, but on the next cycle you might be right up there at the top, depending on how long your research has had to come to fruition. It would be massively damaging on people's individual careers to say—

Q113 Chairman: That will be available when promotion times come round annually, is it not? Somebody is going to know.

Ms Fenton: That is the huge danger with having quality profiles. It is a massive danger with that system, it is true.

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Q114 Dr Turner: There is a very good point arising from what you have just said about the variation throughout the cycle. Do you think there is a risk that to keep people's profile up they will feel obliged to do pot-boiling stuff that they know will produce a paper—

Ms Fenton: That happens all the time. You salami-slice your work, so you are constantly looking as though you are putting out pieces of published work, but actually it is just making sure that you milk the bit of research you have done and squeeze it as dry as you possibly can.

Professor Joyner: This is an example of the law of unintended consequences. Gareth wanted to produce a system where there was a smooth gradation, rather than one where there were great bumps. In theory, the approach which is proposed will do this, but the consequence is that it is very unclear how it is going to work. I personally take the view that transparency and to publish the conclusions would be better than confidentiality in this, because taking Ian's point about what will happen with promotion boards, if it is known that a unit has one international researcher, if it is published everyone will know who that is; and if it is not at least three people in that unit will claim that it is them.

Dr Wharton: There are other mechanisms. The promotion process is not solely based on RAE; there is a matrix which operates, and it operates on peer review and external refereeing. It is quite separate from RAE. To suggest that non-publication of an individual's RAE out-turn will somehow lead to a promotions process whereby everybody will try and make claims to be the person who is not named, I think is not fair in these particular circumstances.

Q115 Chairman: Where did this idea of all these professors come from?

Ms Fenton: Sorry, this is not well-researched evidence; this is purely anecdotal.

Q116 Chairman: Be anecdotal, please.

Ms Fenton: As an academic—

Q117 Chairman: As the Prime Minister once said, we are at our best when we are anecdotal.

Ms Fenton: It appears to me, when I am flicking through the *Times Ed*, that there are an awful lot of chairs being advertised at the moment. I have not done the research on that, but there are lots of departments all over the place trying to build themselves up. A lot of restructuring is going on around institutions, which are slimming down areas where they think they are not going to get the RAE deliverables, bumping up those where they think they will. They are advertising for the big hitters to come in and deliver. What will then happen of course is that these so-called big hitters will arrive; they will not be doing any teaching and will be focusing purely on research, and those staff further down the hierarchy will be dumped on with all the big teaching duties. They will never have the time and space to have the great ideas.

Q118 Dr Turner: Do you think that it would give a much more realistic valuation of the work of a department if all its staff members had to be submitted for RAE, so it then would not matter whether they were on research only or on teaching contracts if people could be persuaded to go on teaching-only contracts? If everybody was in there, you would judge the whole department. Would you prefer that?

Ms Fenton: I would absolutely prefer that; I think that would be an infinitely fairer system.

Q119 Paul Farrelly: Going back to Mr Roberts again, what do you think of his proposal that is not in research quality but that "research competence" should be measured as part of the decision on funding, that is the development of research strategy of individuals and capability? Perhaps the game play might be marked down on that. What do you think about that idea? Is it too complicated?

Ms Fenton: No. There should be all sorts of other factors that will have a play on the research standing of an institution, which should be taken account of within the RAE. One of those should be how they treat their contract research staff, for example. What sort of strategy do they have for building up the careers of people right at the start of their academic lives? What are they going to do to put in seed-corn funding to certain key areas? What are they doing on equal opportunities? It is those things, which build up and contribute massively towards a research culture, that should be taken account of, rather than simply the output at the end of the day.

Q120 Paul Farrelly: What do the other members of the panel think about that. I expected you to say that!

Professor Joyner: I would broadly support that.

Paul Farrelly: Everybody is nodding in agreement.

Q121 Dr Iddon: This might be difficult in an election year, but if a government were able to tell those responsible for the research assessment exercise how much money they had to play with when the funding was going to be released to the universities, how would that modify their thinking?

Ms Fenton: It is difficult.

Professor Haines: It is very difficult. You seem to be talking about how much money there would be in the pool.

Q122 Dr Iddon: Yes.

Professor Haines: I think people are much more interested in how that money is going to be allocated. You can tell us that there will be twice as much money, but if it all goes to eight institutions, then that is not going to help. If all the extra money goes to eight institutions, it is not necessarily going to help. I think we would want to be clear about how the money was going to be allocated.

Q123 Dr Iddon: By whom?

Professor Haines: By RAE—or if it is just extra money that comes in at this particular time, what kind of formula will be used.

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Q124 Dr Iddon: I might be cynical, and I am deliberately being provocative, but it could be possible that those responsible for the RAE have been driving up the standard of excellence in the hope that the money would follow from government. How much truth is there in that?

Ms Fenton: We have got to avoid a debacle like the last time because that caused enormous demoralisation, where people played the game well and the outcome was that it was not fully funded. That is part of the reason for the closure of certain departments around the country. It has been a huge issue. We have to know how the funding formula will work, and we have to have a guarantee that whatever the outcome, it will be funded. I think there is a problem in saying an amount of money will be attached to certain outcomes because when the people on the panel are doing the judging, if they know that, they give somebody a lower profile. It is difficult to speak about it because we do not know how it is going to work. If they give them a lower profile, that will mean that that department is likely to close, and that will cause all sorts of problems for the panel in delivering a judgment. It is a fine line, but the mechanics have got to be up-front, and there has to be a cast-iron guarantee that whatever formula it is, it will be met.

Professor Haines: To answer your question very directly, there has been an increase in the quality and quantity of research since 1992 through each RAE.

Q125 Chairman: If I read you right, you are saying I think that we should scrap the exercise for 2008 until we look at a more robust way of looking at the matrix for all subjects. Is that your conclusion? I do not want long answers, please—"yes" or "no" would—

Ms Fenton: I cannot do a "yes" or "no". It would be a problem because those who got graded 4 last time and worked really very hard to get up to a 5 would be triple gutted if they were told they will not have the opportunity to increase their funding. We are caught in a system. We have to almost carry on with the next RAE as we are on the roll, but step back now and have a fundamental review of the whole system of funding and how we are going to do it in the future.

Professor Haines: It should go on in 2008, and I think we should have enough confidence in our ability to do something which is reasonable and produces reasonable outcomes.

Professor Joyner: Broadly speaking, I agree with that. I do not think you can stop it. What needs to be looked at is the amount of funding and what that funding is intended for, because one of the consequences of the RAE is to drive up the volume. If there is not enough money to sustain that volume, that is a daft thing to do, so there is a need to build some limiting into the system so that the money that is there adequately funds that which is being expected to fund.

Dr Wharton: The question of the fundamental rethink of the way that we do this really has to be drawn out and worked on. I agree with Natalie that there is this problem for those departments that

want to demonstrate that they can do better, and perhaps some transitional funding arrangement could be arrived at. This tinkering at the edges that takes place where you lose five or six grades and you have this strange star mechanism that nobody yet knows how it operates, which is already being second-guessed, is not healthy for the sector. The whole question of higher education funding and research funding needs a proper step back and look at. There are all these piecemeal bits that are being taken up, whether it is the Roberts review, whether or the Lambert review, whether it is the Treasury 10-Year Science funding process. They are all little nibbles, and you need to step back and have a proper look at the whole thing.

Q126 Chairman: You people think about this, as individuals and members of institutions and departments, perhaps more than other academics? Do you think that is going to happen? Do you have confidence that will happen, in terms of the higher education debate which has illuminated this country for the last year and a half? Maybe illumination is not the right description, but it has certainly captivated lots of people's attention. Will it happen?

Ms Fenton: That is your job!

Q127 Chairman: Yes, but we are looking for advice from you. Do you think it will happen? Do you have a confidence, representing the community, that it will happen?

Professor Joyner: No, because there are too many vested interests. There are a lot of institutions that do well out of it. The institutions that do not do well are concerned about a fundamental re-think because they might do even worse than they do now.

Q128 Chairman: Does anybody else have any comment?

Professor Haines: Another reason for running with the RAE in 2008 is that—you are quite right that we are heading for some very interesting potentially turbulent waters with fees, in spite of your efforts, Chairman, to prevent the introduction of £3,000 fees. Who knows what effect that is going to have particularly on science courses and science departments over the next five years? If we do not make sure the RAE at least rolls, and rolls in a slightly better way the next time, we will be in danger of going into a very steep decline in terms of science and technology.

Q129 Paul Farrelly: I did not want to monopolise the discussion but I am particularly concerned about increasing regional disparities with the interplay between the RAE and re-positioning in the market. I wondered if the panel had anything more to say on regional disparities.

Professor Joyner: We are very concerned about it as well. The classic example is that in East Anglia, if you want to do physics you can do it at Cambridge and nowhere else, and that represents a real issue of access. It will drive the vicious circle that makes it more and more difficult for these subjects to survive. Therefore, there is a need for some degree of

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planning and for somebody to have the authority to institute that planning. HEFCE are very clear that their mandate does not allow them to do that, although they are trying to do a little bit of it by the back door. Somebody needs to think seriously about it and to do something effective about it.

Ms Fenton: Absolutely.

Q130 Mr McWalter: I would like to ask Richard this. You are chairman of Save British Science. Why are you not spitting blood about all this? We have just heard that inter-disciplinary research is basically being completely screwed. Everyone knows that long-term research is basically completely sidelined by this whole business. Science is becoming concentrated in ever-fewer institutions, as you have just pointed out with reference to physics in the eastern region. The UK Computing Research Committee tells us that there is an increasing focus on safe incremental research and an unwillingness to cross discipline boundaries—and this is in computing, by the way—even the most clearly interdisciplinary subject virtually that we have; and all of that is going on and you are sitting there very calmly, with your hands across like this! Why are you not getting angry about all of this and really putting forward suggestions about how we can save British science?

Professor Joyner: We have been doing an awful lot about it, and I hope that you—

Q131 Mr McWalter: I know you do good work and I do understand that, but today—

Professor Joyner: The RAE is a significant part of this, but only part of the story. One of the things that is happening is that there has been a very significant investment through the Science Research Infrastructure Fund, and there has been a big increase in the amount of money that goes down the OST line in support of science. Where we have been spitting blood, and where we will continue to spit blood is that we do not believe that the DfES has ever, or as yet, taken its responsibilities for the role that it plays in sustaining the science base with the degree of seriousness that it should. We had a meeting with Alan Johnson earlier in the year, and I would have to say he showed more appreciation for this than any of his predecessors that we have met, so there may be signs for hope there; but this is one of the real issues. In terms of the problems that there are for British science, I suppose if I am honest I do not believe that the RAE comes within the top three.

Q132 Mr McWalter: So it is not a particular problem.

Professor Joyner: It is not the most serious problem that we face. The serious problems that we face are the difficulty of interesting people at school in wanting to take science further, the difficulty of paying really good scientists enough so that they want to come and work in universities, and thirdly this issue of regional depletion of scientific education capability. Those are three problems that for me personally, and I believe for SBS, come higher in the

causes for concern than, for example, revamping the RAE. I do not know how much longer I am allowed to go on, Chairman.

Q133 Chairman: That was a great speech.

Professor Joyner: I should stop.

Q134 Mr McWalter: Chairman, I am astonished because it seems to me that implies a very narrow view of science. We have clearly indicated that a huge amount of activity, referenced by a previous conversation with Ian, which would normally be thought of as science and technology is actually being completely dumped in this process and you are saying it is not a first order problem.

Professor Joyner: No, I am sorry, if that was the impression that I gave that was wholly erroneous. I tend to use science as shorthand for science, technology, engineering and medical research. I certainly include within the type of research that is being talked about the type of research that Ian was referring to earlier on. If I gave that impression I am sorry, that was wholly unfortunate.

Q135 Mr McWalter: Can I put it to you that if kids saw more by the way of scientists doing technological projects, fixing the pollution in the river or whatever, they might be more attracted to science than currently they are. The kinds of things that are going on in our universities are people are increasingly being told “No, do not do that. What we want you to look at is some kind of new microbe that no-one has ever looked at before”, the whole emphasis is away from applied and interdisciplinary work into more and more single discipline, pushing back the frontiers work and that is one of the reasons why we have such a dearth of youngsters wanting to come into science in the first place.

Professor Joyner: I agree with that. The criticism that SBS has always made of the RAE is that it is the only game in town and that is why the university managements are so attracted to it.

Q136 Mr McWalter: But it is not one of your top three problems. Ian, you think it is from the nods that you have been giving.

Professor Haines: You have made my argument for me in a sense with your previous question. I am very clear that there is such an imbalance between what I would call the more academic and the really very expensive research project work compared with those applications, which you have just demonstrated in part, which would catch the imagination of young people much more. When we, as every other university does, have students in to do some work with us, we always do those sorts of projects which are the “gee-whiz” ones which get the school pupils really very excited.

Q137 Chairman: You have all heard, or I hope you have, of the e-university. Has it made any difference whatsoever? Lots of money has been put in, millions

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have been put in which might have gone elsewhere. Has it made any difference to bringing people along into the university environment in research and teaching, in your experience? Has it been picked up?

It was the creation of an earlier Secretary of State.

Professor Haines: The straight answer is no. If you want me to say a little bit more, I think the one thing that would be useful now is they do have—I have met with the people who run it—a very interesting learning platform. It would be very useful if that was made completely freely available to all universities to use if they wish to as an e-learning platform for their work. In my view, the universities paid for it because, so far as I understood it, it was something

approaching £60 million of HEFCE money which was allocated to it in the first place and it would be a very good idea if we all had a share of it.

Q138 Chairman: Does anyone else have any experience of the e-university and what it has brought to the system?

Ms Fenton: I would just agree with Ian that there is no measurable impact at all.

Dr Wharton: Same here.

Chairman: Many thanks to you for coming along and adding to the debate. We are ready to produce a report, so thank you for your honest, upright answers and your experience. Thank you.

Written evidence

APPENDIX 1

Memorandum from Professor Charles Galasko

It is the view of many of my colleagues and myself that the Research Assessment Exercise has been based on naive assumptions, namely that the amount of grant income and the impact factor of the journal in which the work was published is what is important, rather than the impact the research has had. It is generally accepted that total hip replacement is one of the greatest advances in medical care during the past century and some individuals have claimed that it is the most important development in terms of the suffering it has prevented. I am sure that everyone would agree that it has had a major impact on human well-being yet, in terms of the research activity exercise, Sir John Charnley would not have been recognised as an outstanding researcher. He did not receive the amounts of research grant funds that are currently required for a five star rating nor were his publications necessarily in high impact journals but his work has had a significant impact, probably greater than that of the vast majority of current five starred researchers. Research needs to be assessed but perhaps the best way of assessing it would be for a peer group in each discipline to evaluate the impact that the research has had in addition to the potential impact that it may have. This principle could be applied to research in all disciplines and not only to research in the field of medicine. Within medicine it would need to be evaluated by a peer group of the same specialty.

March 2004

APPENDIX 2

Memorandum from Save British Science Society

TIME FOR A CHANGE

1. SBS is a voluntary organisation campaigning for the health of science and technology throughout UK society, and is supported by over 1,500 individual members, and some 70 institutional members, including universities, learned societies, venture capitalists, financiers, industrial companies and publishers.

CURRENT PROPOSALS

2. If we must have some kind of RAE, then without question, the new system of quality profiles will be an improvement on the old gradings. Precipitate discontinuities in funding at the boundaries between grades have never been justified, and we believe them to be unjustifiable. It is to be hoped that the new system will distribute money more fairly than the previous system.

3. However, there remain very serious problems with the new proposals. The most serious is that institutions will not have any idea in advance how their assessment scores will translate into financial rewards. Sir Gareth Roberts' Review was unambiguous in saying that "it is of the first importance that there is a clear and predictable relationship between assessment outcomes and funding".¹ Roberts even published (as Figure 4 of his report) a hypothetical table, illustrating how this could be done simply and clearly, recognizing that the various weightings would be different in England, Wales, Scotland and Northern Ireland.

4. The rejection of this principle by the Funding Councils will make the proposed RAE in 2008 very unfair. It is open to the Councils to say that work scored with 3-stars under the new system will receive twice as much money as work scored with 1-star. It is equally open to them to say that the factor will be three times as much, or 25 times as much, or 57.8 times as much, or 100 times as much, or any other number. The precise value is, in essence, a political decision.

5. However, universities are not to be given any advance warning of what the ratio will be.

6. It is as if they are playing a game in which they do not know the rules, because the referee will not even decide what the rules are until after the game has ended. It is like living in Alice's *Wonderland*.

7. Another problem with the proposed system is that the next assessment proposes to grade work that was carried out between 2001 and 2004, even though nobody knew during that period what the assessment would ask them to achieve. Vice Chancellors and Heads of Department, and their staff, may end up being penalised for perfectly defensible decisions, taken in good faith in, say, 2002, which had knock-on consequences that will affect the results of the assessment. This cannot be fair.

¹ Joint consultation on the review of research assessment: Consultation by the UK funding bodies on the review by Sir Gareth Roberts, 2003 [HEFCE 2003/22].

8. All in all, despite the fact that the new proposals contain some improvements over the previous RAE, they contain fundamental inequities, principally caused by the fact that people and individuals will be judged, and rewarded or penalised, as a result of an assessment covering a period during which they did not know what the nature of the assessment would be, and the outcome of which, in terms of financial reward, will remain secret until it is too late to do anything about it.

THE PURPOSE OF RESEARCH ASSESSMENT

9. Throughout the whole process of reviewing the RAE, there has been a refusal on the part of the Government to address the question of what the RAE is for.

10. If it is intended as a peer review process, it is unnecessary duplication, because the bulk of what is assessed is either:

- (a) grant income, which has already been handed out on the basis of rigorous peer review; and
- (b) papers, patents and other publications, which are also rigorously reviewed, in various ways, before publication.

11. Not surprisingly, as the President of the Royal Society has demonstrated, the outcome of the peer review process of the RAE is almost identical to the outcome of the peer review process for grant applications.² In other words, hundreds of people spend a year assessing information that thousands of people have spent months preparing, and produce an outcome that could have been reached in a few minutes. Most of those people could have spent that time better doing more research.

12. Moreover, the costs of this process, although relatively small (compared to other administrative processes), come out of a research budget that is already inadequate. The money would be better spent doing more research.

13. The new proposals will continue to force thousands of people to spend large sums of money and huge amounts of time only to discover that nothing has changed, and that the best research is still being done by the people with competitive grants who publish in competitive journals.

A NEW PROPOSAL

14. While acknowledging that the RAE has run its course, SBS sees some problems in suggestions, such as that by the Royal Society, that the money can simply be distributed on the basis of topping-up existing peer-reviewed grants.

15. Any funding system needs to recognise that, in a world of over 100 universities, each distinct from the others, we cannot simply return to the good old days when dual support worked well. We must, however, attempt to preserve what was good about the good old days, while adjusting to modern constraints.

16. Our proposal for “triple support”, although it contains three elements, is probably simpler to understand than the ambiguities of dual support as it is currently supposed to work.

17. First, academic salaries should be paid out of a block grant, as at present. The size of the block grant distributed to each institution might well be decided on a simple model like that proposed by the President of the Royal Society, and would not require a burdensome assessment procedure.

18. The second element of triple support would be the bulk of the rest of the available funds, which would be distributed prospectively by the Research Councils; they would pay at least 100% of the full economic costs of the work they supported. There would be no ambiguity or possibility of blaming others for the underfunding of research projects. The onus would lie squarely with the Research Councils to pay full costs. Depending on available resources and political will, they might pay more than 100% of full costs, to ensure that the people in the best institutions were rewarded with unencumbered funds to pursue their own ideas.

19. The third element would be small in magnitude but hugely important. Distributed according to a very simple formula (perhaps nothing more than a capitation based on a headcount), it would allow institutions a small pot of money for entirely novel and blue skies research. Because it would be identified as a separate stream, it would not be possible for Governments to blur the boundaries, as they can under the current dual support system, allowing “blue skies” funds to be diverted to prop up unsustainable funding elsewhere.

20. Because the amount of money in the third element of triple support would be relatively small, there would be no need for a complex research assessment process, and because it would be distributed simply, there would be no possibility of particular groups and individuals demanding “their” shares (these demands should in any case be met by the second element of the scheme). This would leave local managers with genuine flexibility to pursue unfashionable, novel and untested avenues of research.

21. There is no doubt that such a scheme would need refining, and there is also no doubt that the political establishment must stop passing the buck and decide whether it wants to provide more money or accept less research. The current volume of research is not sustainable on current funding levels.

² The UK’s dual support system: Time for a fundamental review? Anniversary Address by the President of the Royal Society, 2003.

22. The RAE has run its course, and although the new proposals introduce some improvements, it is time for the Government and the research community to face up to the fact that it has outlived its usefulness, and that a new system is needed for distributing research funding fairly, with a proper balance between grants for specific projects and unencumbered funds for new ideas.

April 2004

APPENDIX 3

Memorandum from the Institute of Physics

The Institute of Physics is a leading international professional body and learned society, with over 37,000 members, which promotes the advancement and dissemination of a knowledge of and education in the science of physics, pure and applied.

Overall, the Institute welcomes the proposals outlined in the funding bodies' report, *Initial decisions by the UK funding bodies*, of the plans for the new RAE, which will take place in 2007–08.

In particular, the Institute is pleased that:

- the RAE following the 2007–08 exercise will be on a six-year cycle;
- outputs will remain at a maximum of four per researcher. However, this output must look beyond the traditional scope of open literature publications. There must be specific emphasis on a broader interpretation so that more applied work can be considered. There is also the issue of the access to facilities being recognised (see other issues);
- the results will be published as a quality profile, which will be criterion referenced;
- individual researchers will not be rated or scored. This will prevent the potential abuse of information within a university;
- there will be no multi-track approach to assessment, which would have proven to have been an unpopular mechanism;
- joint submissions are not to be discouraged. This is welcomed as universities should be encouraged to work together to strengthen the output of UK Ltd, rather than a continued emphasis on the universities trying to compete between themselves. In addition, an increasing amount of research is interdisciplinary in nature, and fully appropriate assessment mechanisms need to be adopted. Encouraging individual researchers or small groups to submit with departments at other institutions could aid the development of regional collaborations between research groups. However, it may also act as a step towards the poaching of staff;
- applied research is to be given due weight. The next RAE needs to recognise and reward the highest quality of applied research. The Institute suggests the development of additional criteria that can enable the assessment of the quality of industry/exploitation oriented research, which may not have been published in academic journals. With regard to funding, we concur with the funding bodies' report, that the quality related research grant is not the sole means by which applied research could be supported within HE. As recommended in the Lambert report, third-leg and other funding streams must be enhanced/introduced;
- the panels and sub-panels' structure will be finalised with research community consultation. Panel representation from the user community will need critical attention. Will they be paid? If not, what benefit will they see? The effectiveness of their ability to contribute to the review will have to be matched by the type of output submitted by the researchers, as they will not be so accustomed to academic papers. The practicality of commercial sensitivities is also not trivial if an independent review is to be held. With regard to overseas representatives, the Institute has some enthusiasm for using international experts to enhance the credibility of the exercise, but there would be practical barriers: time, non-familiarity with the UK scene and expense. Plus, if they are to be involved, then they should be few in number so as not to overwhelm the panels;
- the main panels and sub-panels should be encouraged to refer to quantitative indicators appropriate to their discipline;
- the sub-panels will have the freedom to define their own assessment criteria. It is essential that these criteria are made public. In addition, the Institute trusts that the expert sub-panels will continue to consult appropriate professional bodies, while drawing up their criteria; and
- equal opportunities will be addressed. Whether by design or not, the RAE affects the demographic structure of research in the UK. An explicit recognition of this will allow it to be a more positive influence, for example in the development of the careers of young scientists and women. However, paragraph 69b of the funding bodies' report states, "... provision for institutions to identify cases where an individual researcher's personal circumstances have affected his or her productivity..." This sounds as though such individuals would be flagged as special cases. Perhaps a more equal procedure might be to allow some sort of "productivity index" to be defined for everyone, not

strictly determined by the FTE fraction of time worked; so most people would be 100% but someone who has worked half-time throughout might be only 33% productive. Then the quality of that person's output should be judged independently of the quantity.

However, the Institute is disappointed that:

- there will be no mid-point monitoring. The Institute is of the view that a department that has invested in new facilities and/or staff and that wishes to improve its rating, should be able to apply, with the appropriate approval, at intervals of no less than three years, for a re-assessment; and
- universities will be asked to identify staff whose research outputs they wish to submit for assessment. The Institute wholeheartedly agrees with the Committee's RAE Inquiry report of April 2002 about the non-inclusion of researchers, . . . *Funding should reflect the actual amount of research and its quality over the whole department and not those deemed active. Universities should have no incentive to omit any researchers.* The Institute is of the view that all active staff who are contracted to do research should be entered into the RAE. This would reduce the game playing that currently exists and possibly favours larger departments.

However, the Institute does appreciate that entering 100% staff will increase the administrative burden placed upon the panels. Hence, the burden could be reduced by not entering all research assistants, as they could dominate some submissions. In any case, there should be very clear guidelines on who is or is not eligible. This issue is the one that encourages the most game playing.

OTHER ISSUES

Education innovation—stifled

The Institute welcomed the explicit recognition of the importance of the link between teaching and research in the funding bodies' consultation document (paragraph 130). But was disappointed that this was not reinforced in the latest report (in fact, there was no mention of teaching at all).

The Institute re-iterates the point it made in its last submission to the Committee on the RAE, that the RAE has succeeded in improving the overall quality of research in the UK. The unanswered question is whether the concentration on research output has had a detrimental effect on other aspects of HE, for example, the teaching and exploitation of research. The Teaching Quality Exercise, which was carried out for UK physics departments in 1998–2000, found teaching of physics universally to be of a high quality. There is concern, however, that innovation in teaching and learning is not being given as much attention as required.

The two issues of concern are:

- (1) people who concentrate on teaching are made to feel second rate; and
- (2) people who are based in subject departments and who do educational research are being squeezed out because subject panels will not accept their papers. Such people are not usually able to find a niche in a submission to the Education panel.

Access to large facilities

Researchers are awarded time at central facilities (CCLRC) through intensive (and often international) expert peer review based upon the strength of their scientific research proposal for the use of that beam time. In this respect, beam time proposals are very much like research grant proposals.

One day of beam time can be valued at between £8k and £15k per day, depending upon the facility, and so any research scientist who is sufficiently successful at obtaining time at these world class facilities could be generating an equivalent "research income"—ie resources justified and allocated for specific research programmes—of up to £0.5 million per annum.

Until now, the inclusion of these high profile, generally international quality, research awards have been treated by the funding bodies and the RAE in a rather *ad hoc* fashion—and generally not as a *pro rata* (or even scaled) research income, despite the fact that the award of such beam time resources is a clear indicator of "international excellence" through international competition.

The Institute recommends that the full records of beam time awards to individual scientists (which are already kept by the facilities) are co-ordinated and returned to the appropriate units of assessment as a research income equivalent index that is considered alongside direct research income in the RAE evaluations.

In addition, significant work is being done by many particle physics groups in the UK to construct components of the LHC detectors. The R&D phase (1990's) provided at least some opportunities for publication. Success in the current construction phase requires a concentration on details and quality control that many outside reviewers would find boring, but which is in fact absolutely essential. Once the LHC has started and is running well (hopefully 2008) many papers will result, but they will be too late for the coming RAE. This low period in publications could seriously damage the RAE ratings of those physics

departments that are in fact making the most important long-term international contributions to particle physics during the period. It is difficult to see how this can be corrected, but allowing inclusion of reports that did not appear in refereed journals might be of help.

Dual support

The RAE, in conjunction with the dual support system and the new proposal made last summer for requiring the calculation and funding of the full economic costs of research, could cause a significant mismatch between the potential university and Research Council contributions to research. The university contribution needs to come essentially from the QR funds as determined by the RAE and it needs to provide a substantial part (40% was suggested) of research, with the remaining 60% coming from the Research Council. However the RAE judges each university department on rather general grounds, while the Research Councils often have short or medium-term projects or programmes that they want to fund. A particular department may be well suited to do research in a particular Research Council project, without having done well in the more general judgement of the RAE. It will then be hindered from obtaining this Research Council funding by their lack of funds for the other 40%. Ideally, universities would be well enough funded so that they had some “discretionary” funds, and could make wise decisions and plug such holes. However the situation is certainly not ideal, and in fact most universities are struggling to remain solvent, with little such room for application of wisdom to funding decisions. An under-funded system is not improved by changing the method of distributing the funds.

April 2004

APPENDIX 4

Memorandum from the Royal Geographical Society with the Institute of British Geographers

The RGS-IBG is the learned society and professional body representing geography and geographers. It was founded in 1830 for the advancement of geographical science and has around 14,000 members.

We are broadly supportive of the changes to the RAE outlined in *RAE 2008: Initial decisions by the UK funding bodies* (RAE 01/2004) published in February 2004. The new system has avoided some of the potential pitfalls in Sir Gareth Roberts' review, such as institution-level assessment of “research competences”. We believe that the new system will provide a robust and reliable system of research assessment, without creating an unwarranted administrative burden.

Many critical aspects of RAE 2008 have not, however, been finalised, such as the panel configuration and recruitment, and the formulae for allocating funding according to the quality profile. The latter is especially important in our view as we have serious concerns about the potential for further concentrations of research funding.

The reduction in funding for departments rated 4 in the last RAE was particularly alarming and we strongly recommend that RAE 2008 does not continue to drive to greater concentration or selectivity of funding. With regard the current system and the 4-rated departments, there have been some recent welcome commitments from the Department for Education and Skills and the Higher Education Funding Council for England (HEFCE) to alleviate the cuts to some degree. For instance, in March this year HEFCE announced that the average unit of resource for 4-rated departments will be capped in real terms rather than cash terms (HEFCE EP 03/2004). It was a positive change as the previous promise to maintain funding for 4-rated departments at £118 million until the next RAE amounted to a *de facto* cut as it was not linked to inflation. Such recent changes to the funding of these departments has not, however, been enough to reverse the decline in funding.

Geography departments rated 4 are struggling to find sustained funding, despite the fact that, as the RAE standard scale describes, the research quality is of “national excellence in virtually all of the research activity submitted” with “frequent examples of international excellence” (*RAE 2/99: Guidance on Submissions Research Assessment Exercise, 1999*). For example, the Flood Hazard Research Centre at the 4-rated department at Middlesex University undertakes internationally recognised work to improve policy making and implementation in the water management field and it won Queen's Anniversary Prizes in 1998 and 2003. The many 4-rated geography departments in UK (35% are rated 4 in the 2001 RAE) are an important bedrock and, along with 3a and 3b departments, a significant training ground for UK geographical research.

We strongly recommend that the star ratings proposed for RAE 2008 do not have a funding formula that concentrates any further the research funding across our higher education institutions and departments, and indeed a funding formula that goes some way to reducing the current levels of concentration would be welcomed by much of the community.

In 2003, The RGS-IBG collaborated with around 15 other learned societies and subject bodies to try to halt the moves towards excessive funding selectivity. I enclose a copy of the joint statement of subject groups that was disseminated in June 2003. We hope that the Science and Technology Committee will support the many organisations and individuals within the higher education sector that criticised the moves towards further funding concentration, and ensure that the same mistakes do not happen again under the new system in 2008.

April 2004

APPENDIX 5

Memorandum from the Biosciences Federation

INTRODUCTION

The Biosciences Federation is an umbrella body of 31 organisations that have a cumulative membership of some 65,000 biological scientists. The organisations cover the full spectrum of biology (see Appendix) (not printed).

In order to construct this response, member organisations were sent summaries of the Commons Committee inquiry into RAE 2001 and its recommendations; the Funding Councils' conclusions about the RAE; the proposals of the group led by Sir Gareth Roberts; and the key elements of the final process intended for RAE 2008. Organisations were asked to complete the questionnaire below that is based on the type of information that the Commons Committee requested. This submission collates the replies that were received.

SUMMARY OF RESPONSE

- Member organisations of the Biosciences Federation consider that the peer-assessment scheme for RAE 2008 is a robust and reliable system, but opinion is divided on whether the outcome justifies the burden and cost involved. Overall, the scheme receives lukewarm support.
- There is a strong opinion that the RAE will continue to skew institutional priorities, and that quality profile assessment will not discourage the tactical exclusion of weaker researchers as institutions strive to achieve the best possible profile.
- The Funding Councils should indicate the approximate ratios of funding for work at different star levels.
- The main panel / sub-panel structure may help overcome the previous perceived lack of parity between panel judgements, but more information on panel working is required to predict this with more certainty.
- Likewise, without further detail it is difficult to judge whether cross-disciplinary work, applied research, and joint submissions will be dealt with more satisfactorily than before. The respective roles of the RAE and the Higher Education Innovation Fund in funding applied research must be clarified.
- The failure to integrate the RAE review with the ongoing assessment of dual support, or to set it in context with the whole of government policy on higher education, is criticised.

General comment

At present we only have a framework of the procedure for RAE 2008. It is difficult to comment sensibly on a number of issues until detailed information on panel structure, criteria, and working methods, for instance, become available.

1. Do you consider that the scheme proposed for RAE 2008 provides a robust and reliable system of research assessment? Large majority agreement, although sometimes qualified

- The scheme is based on that of RAE 2001, where the main criticisms did not relate to its robustness or reliability.
- The robustness will depend upon how clearly the criteria for assessment are defined, how tightly they are adhered to by assessors, and the extent to which the same criteria can be applied across disciplines.
- The RAE process must be totally transparent if there is to be general support among the biosciences community for the final outcome. Therefore, the more clearly the criteria are defined the better. It is apparent from this submission that there are currently several areas of uncertainty.

- The RAE places a very heavy burden on panel members. They will have more time to make considered judgements if the administrative support from the Funding Councils is improved considerably.
- 2. Is the likely burden and cost placed on institutions justified? Fairly evenly divided*
- There was less confidence that the benefits justify the cost than when this question was posed before RAE 2001. This probably reflects the Funding Councils' failure to fund fully the improved ratings achieved in that RAE and is an indication of increasing scepticism.
 - The decision for RAE 2008 not to provide an indication of the amount of funding that will be associated with each star grade can only make it more difficult for less research-intensive institutions to decide whether it is cost-effective to submit for assessment.
- 3. Do you prefer the "one size fits all" approach to the 4-section model proposed by the Commons Committee or the 3-track approach proposed by the Roberts group? Fairly evenly divided*
- The quality profile approach intended for RAE 2008 should ensure the funding of pockets of excellence in otherwise weaker departments, thus removing one of the justifications for a multi-track approach. With regard to alternative models some respondents questioned how it could be ensured that the top-rated departments not required to submit to the RAE maintain their standards. In a previous consultation Federation members expressed concern that in multi-track models it may prove difficult to move from one track to a higher one because of funding differentials.
 - On the other hand it was noted that under the alternative models institutions with few expectations of high ratings could opt for a less bureaucratic assessment, and that this would relieve pressure on RAE panels.
 - There has been a fundamental failure to integrate this review of the RAE with the ongoing assessment of dual support. The 4-section model was intended, at least in part, to reduce the continuing divergence of government funding streams.
- 4. Overall, how happy are you with the new scheme? (on a scale from very happy to very unhappy) Neutral or happy*
- Consistent with the replies to earlier questions, there were few very strong views expressed either as satisfaction or dissatisfaction. This is a cause for concern since it does not indicate enthusiastic support for the proposed RAE process. Some commented that until more detailed information is available it is not possible to give a definite response.
 - The switch from a stepped to a more nearly continuous grading scale is seen as a major benefit of the new scheme. No modifications to this should be allowed that might lead back to categories of departments being retained.
- 5. Will the scheme do anything to address the problem that the RAE is seen to be "the only game in town" for securing additional cash, so skewing university priorities? No*
- The problem lies in part with the fact that the exercise relates to research as a stand-alone core activity of academic output without consideration of other core activities such as the organisation and delivery of teaching. It is thought that the RAE will continue to serve poorly less research-active staff who may make a major contribution to teaching and administration.
 - Even without the financial implications, the kudos attached to higher RAE ratings will ensure that the priorities of universities will continue to be directed towards developing research-specialised departments that contain staff selected primarily on their RAE returnability.
- 6. Do you consider that the quality profile assessment will have the desired effect of encouraging departments to include all eligible researchers? No*
- It is considered that many institutions, particularly the stronger ones, will be concerned about the shape of the quality profile and will not want a tail. These may well exclude eligible researchers who are likely to obtain a low score. The decision may depend on the funding attached to lower star levels, but this will not be known in advance.
 - Another driver to exclude weaker researchers is the tendency for the media to construct research rankings tables, and the potential effect of these on student recruitment and especially on Research Council funding.
 - Despite the best intentions of the Funding Councils the effect could be to drive staff into separate research or teaching categories, which may not be in the best interests of undergraduate students.

7. Can you see other “games” that institutions will be tempted to play? Yes, inevitably

- Quality profile assessment will not discourage departments from excluding weaker eligible researchers, or those who are predominantly teachers, for tactical reasons (see question 6).
- Some staff designations may be altered prior to the RAE from research-active to research inactive in order to ensure the optimal profile. On the other hand ‘virtual’ departments may be created to house the research superstars.
- At the worst, institutions could start to shed teaching staff and replace them with talented researchers, to the detriment of the training of a future generation of researchers.

8. The Funding Councils argue that it is not possible to assign an amount of cash for each star grade in advance since the government cannot make an open-ended commitment. Will this be a major disadvantage for the new assessment scheme? Yes

- The RAE is such an important issue for institutions that it is essential that the goalposts are clearly defined at the outset to aid sensible planning. At least it should be possible for the government to advise the total budget available and the approximate ratio of funding to be awarded to work at different star levels.
- Failure to provide this information could actually encourage the practice of omitting some researchers from assessment, as institutions endeavour to achieve the highest possible proportion of work at the top star levels.
- It is essential that the funding applied to each star grade is not used as an instrument to drive greater research selectivity. The Biosciences Federation has said consistently that it opposes any further narrowing of the research base. The present step-wise skewing of funding between grades denies less highly rated departments the chance to improve, allows poaching of their best staff by more highly-rated departments, and jeopardises the emergence of future generations of talent from such departments.

9. Will the main panel/sub-panel system overcome the perceived lack of parity between panel judgements that was criticised after RAE 2001? Potentially it will help, but depends on panel structures and methods of working

- It will depend on how effective the main panel is in ensuring that the agreed criteria are applied consistently by the sub-panels, and whether all related disciplines can be accommodated under a single main panel. This is particularly important for the biomedical sciences, which comprise a large number of units of assessment. Without knowing what panel structures and working criteria will be it is not possible to be more definite.

10. Will this panel system ensure that cross-disciplinary work is assessed more fairly? Unsure, but some doubt

- The Funding Councils explanatory booklet RAE 01/2004 highlights, as one of the main points from the consultation responses to the Roberts group recommendations, that the assessment process should recognise better excellence in fields crossing traditional discipline boundaries. Yet in its summary of RAE 2008 there is no discussion of how this is to be achieved more effectively than in 2001. In light of this most respondents feel unable to make a firm judgement.
- Panels assessing cross-disciplinary work will need to take into account that some of the journals that report such work have a lower impact factor than ‘specialist’ journals, otherwise this will further load the dice against such activities.

11. Are you content with the arrangements for ensuring that applied research is dealt with more satisfactorily? Unsure, additional details required

- The Funding Councils are clearly aware of the problem, and have taken steps such as ensuring representation on panels of commissioners and users of research, and requiring panels to make clear how they will assess practice-based and applied research according to criteria reflecting appropriate characteristics of excellence. But until this information is available it is not possible to make a firm judgement.
- The criteria for deciding whether applied research should be eligible for funding under the RAE, or under an expanded Higher Education Innovation Fund, and the question of how infrastructure costs will be met, must be addressed as a matter of urgency. Otherwise such research risks falling between the two. The problem of the RAE for applied research was discussed in two articles in the Times Higher Education Supplement, on 26 March and 2 April.

12. Are you content with the arrangements for dealing with joint submissions? Yes, with reservations

- It will need to be spelt out how substantive a collaboration has to be to justify a joint submission. Many departments will have multiple collaborations at home and abroad.
- Some respondents considered that it will be difficult for institutions to indicate their respective shares of the work described.

13. Will the assessment method take better account of young staff as yet without a publication record? No (majority opinion)

- There remains a problem with young staff of great promise who may, as yet, have only one or two papers. The provision for such staff was considered quite extensively by the Roberts group, but is not mentioned in the Funding Council paper RAE 01/2004 other than in a vague reference to panel and sub-panel consideration of departmental strategies and staff development.
- There is the potential for some individuals to be considered as part of larger research group assessments, but the direct impact of this on young researchers is unclear. It is an undesirable solution; young researchers need to be assessed as independent scientists

14. Other comments

- The assessment and funding of research has to be considered in the context of the whole of government policy for higher education. It is not possible to expand the system out of all recognition and maintain the quality of teaching and research without spending a lot more money. How can Heads of Department ask for extra research effort from staff when the teaching and administration load on departments has become so heavy?

April 2004

APPENDIX 6

Memorandum from the British Society of Criminology

INTRODUCTION

1. The document is organised in the following form:

1.1 Background information:

- 1.1.1 the British Society of Criminology (para 3);
- 1.1.2 the expansion of criminology (para 4);
- 1.1.3 the emergence of criminology as a distinct discipline (paras 5 and 6);
- 1.1.4 the institutional dispersal of criminology (paras 7 and 8);

1.2 Criminology in the RAE 2008³ document;

1.3 The RAE and Criminology: implications of dispersal with recommendations;

1.4 Summary of conclusions and recommendations.

The British Society of Criminology

2. The British Society of Criminology is the sole body in the United Kingdom representing professional criminologists. It has approximately 800 members, of whom 650 are employed as academic staff or professional researchers, with the remainder being practitioners or student members.

The expansion of criminology

3. Growth is here indicated in three ways. First, over the last four years, the number of members of the Society has increased by approximately 40 per year, reflecting a steady and sustained growth in professionalisation of the discipline. Secondly, the number of academic programmes is increasing: in 2003, UK universities offered 40 full degrees in criminology and well over 700 which included criminology as part of the programme. There were at least 243 postgraduate programmes in the subject. Because of criminology's interdisciplinary location in the academy it is impossible to calculate the number of research students: what is essentially criminological research may at present lead to qualifications in a wide range of

³ RAE 2008: Panel configuration and recruitment (RAE 02/2004).

disciplines. The third and final measure of growth is that of the 34 departments which responded to a postal survey carried out by the Society in June 2002, 31 reported that they had submitted one or more criminologists to the 2001 RAE, whereas only 28 reported doing so in 1996: a small increase, but indicative.

The emergence of criminology as a distinct discipline

4. Criminology has diverse origins: in social biology; in political science; in social psychology; in social work; in law; in social statistics; and in sociology. From this inter-disciplinary origin criminology has developed into what has been widely regarded as a cross disciplinary subject. Most recently it has become clear that in addition to a distinct subject matter (processes of criminalisation; offending; the treatment of offenders) criminology has also generated a body of theory which now develops in terms of its own unique concept material. Since criminology examines its subject matter from this distinct theoretical standpoint, it deploys a range of methodologies and techniques appropriate to the issues and perspectives generated by the theory. In most cases methodologies developed within other social sciences may be adapted for the purpose at hand; in other cases a new method has to be developed. Examples here might be the "self report" method for the study of offending, or the more recent efforts to develop techniques for analysing both illegal and legal international networks. In these professional aspects of theory and method, criminology is now a separate discipline.

5. Recognising this, the Society's members urgently requested it to establish "benchmarks" for criminology. This process is currently underway, in conjunction with C-SAP (a sub-committee of HEFCE responsible for Sociology, Anthropology, and Political Science).

The institutional dispersal of criminology

6. Criminology in the UK is primarily taught in a range of host departments. This spread is indicated by the results of a survey of submissions to the RAE 2001 carried out by the Society. Of the 34 responding departments, 52% (16) submitted the work of criminologists to the Social Work and Social Policy panel; 26% (8) submitted such work to the Law panel; 23% (7) submitted it to the Sociology panel.

7. Dispersal of research in criminology as between institutions is also indicated by the 243 postgraduate programmes in criminology (certificates, diplomas, Master's, and PhD courses) which are at present offered in the UK. While some institutions may offer courses at more than one level, this none the less remains an indicator of widespread interest on the part of both students and institutions. To balance the picture, it must also be pointed out that there are some relatively large and long-standing centres of research in criminology, for example the Institute of Criminology at Cambridge, the Department of Criminology at Keele, and the Mannheim Centre for Criminology at LSE. Examples of centres at newer universities include the Centre for Criminology at the University of Glamorgan and the Community and Criminal Justice Research Unit at De Montfort University.

CRIMINOLOGY IN THE RAE 2008 DOCUMENT

8. The Society is happy to record that the structures proposed in the RAE 2008 document adequately address the needs both of established disciplines and of a cross disciplinary subject, such as criminology, as demonstrated in paragraphs 7 and 8 above. The Society has therefore welcomed the proposal in RAE 2008: Panel Configuration and Recruitment, (paragraph 29, p 7) for "colleges of assessors with the required expertise" to be established for such disciplines, and the accompanying assurances that the problems of assessing "cross disciplinary fields" (*ibid*) is being taken seriously. In its submission to the RAE 2008, the Society has recommended the establishment of a College of Assessors for Criminology for the 2008 RAE.

9. By 2008, however, the unique disciplinary character of criminology will have been recognised and benchmarks established. In the wake of this it is likely that institutional arrangements will be changed, and additional centres and departments of criminology will be established. For the longer term future, therefore, the Society has indicated its intention of bidding to become a separate unit of assessment, with its own disciplinary sub-panel for all subsequent RAEs. Aside from this professionalisation and institutionalisation, the growth rate of criminology indicates that there will also be a sufficient level of submissions to provide an appropriate workload for such a sub-panel.

10. Because we can identify these possibilities for development, the Society is pleased with these aspects of the RAE 2008 report.

THE RAE AND CRIMINOLOGY: IMPLICATIONS OF DISPERSAL

11. In paragraph 7 we demonstrated that research in criminology is dispersed between disciplines; in paragraphs 4 and 8 above, we argued that criminological research is also geographically dispersed. Criminology is taught and criminological research is carried out in a wide range of institutions, from the most ancient to the very newest universities. Indeed, it is the view of the Society that the majority of postgraduate work in criminology is undertaken in the newer universities, which historically have tended to

be more open to emergent disciplines. The same may well be true of all criminological research. The present organisation of the RAE causes distinct difficulties for emergent disciplines such as criminology which are located to a quite considerable extent in institutions which historically have been less well resourced.

12. We have identified difficulties for such institutions and for criminological research located there. The first is the cost of the RAE; the second is its centralising tendency; the third is its failure to support small groups of excellent researchers working in larger departments. We argue that these difficulties do not arise in isolation, but compound each other in the case of emergent disciplines with a strong base in new universities, such as criminology.

13. The administrative costs of preparing for the RAE are well recognised. Since these costs are more or less standard across institutions, relatively speaking they impact most severely on the institutions with least resources, which may in many cases be the institutions least likely to benefit financially from the Review. The Society therefore supports the proposals set out in paras 79-81 of the Roberts Review of Research Assessment (May 2003)⁴, which would create the option of less expensive review systems for the least “research intensive institutions”, as well as a simplified review for less research intensive departments within those institutions which do not opt for the full (and more expensive) review process. Such a recognition of the bureaucratic burden would be welcome, provided it did not over the long term exacerbate the centralising tendencies discussed below. However, sympathetically interpreted such arrangements could allow for an institution to enter for full review only one or two excellent or emergent departments, which might well include criminology.

14. The Society is concerned about the centralisation of resources which results from a policy of rewarding excellence on two grounds. In the first place, social scientific disciplines such as criminology do not require the kind of expensive equipment which demands the economies of scale which centralisation makes possible. Quite small groups of criminologists working together can achieve excellence. The equation of centralisation with excellence therefore rests on a false premise. In the second place, the corollary of centralisation is a relative starvation of funding for the non-centralised. The Society is therefore opposed to the creation of a “Premier League” for criminology. Such deprivation of resources stifles innovation, and is particularly harmful to those disciplines which have the potential for rapid development.

15. As regards innovation, a second difficulty of the “old” RAE system was the double bind in which less well resourced institutions found themselves. Cost is related to frequency of review, and the six year gap between reviews recommended by Roberts has apparently been accepted. On the other hand, for an emergent discipline or an innovative research group, six years may be too long to wait before the researchers, starved of resources and burdened with teaching, are lured away by a “centre of excellence”. The standard of the institutions in which most students are taught would deteriorate, and the innovative research group be broken up. This could be disastrous for a rapidly growing discipline such as criminology, which needs to grow in availability or “spread” as well as in depths of research. The Society therefore recommends that an institution be entitled to a mid-term review for any department which a “light touch” assessment (Roberts, 2003, para 90) has deemed likely to achieve a sufficiently high standard for a full review within three years. The costs to the institution would be relatively light; the costs of organising the assessment could be reduced by using the same secretarial and review panels as at the main review, and perhaps by setting a ceiling on the number of such mid-term reviews which could be carried out. In any event, such a system would make it possible to support emergent excellence, and would provide the resources for potentially fast growing and fast improving departments to retain and attract staff and so to achieve excellence in research. The RAE would no longer be seen (to quote one submission to the Society) as “a dead hand on innovation beyond the fringes of the already excellent”. Such pump priming is particularly necessary for emergent disciplines such as criminology.

16. The Society therefore suggests that some of the problems of cost, centralisation, and the relative resource starvation of new and innovative research groups in the less well resourced institutions could be addressed by careful adaptation of the Roberts principles. Conversely, we argue that without such modifications to the RAE system not only will the best get better, as intended, not only will the weakest get worse, but also newly emergent disciplines and innovative researchers will be stifled. Criminology and criminologists and those who depend on their contributions for policy and practice would be harmed.

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

17. The Society welcomes the proposal in RAE 2008 (2004, para 29) for “colleges of assessors” in cross disciplinary subjects.

18. The Society supports the proposals of the Roberts Review (2003, paras 79-81) for greater choice for institutions in the way they are reviewed, and in the way particular departments within institutions are reviewed. This could reduce the cost burden while allowing particular departments of high quality to be entered for a full review.

19. The Society considers that the equation of excellence with the centralisation of resources rests on a premise derived from the physical sciences. Such centralisation is inappropriate for the social sciences.

⁴ *Review of Research Assessment: Report by Sir Gareth Roberts to the UK funding bodies. Issued for consultation May 2003.*

20. The Society considers that the centralising tendencies of the “old” RAE inhibited the development of newer disciplines such as criminology, and of innovative research.

21. The Society considers that a delay of six years between reviews, while cutting costs, also harms rapidly developing and innovative disciplines such as criminology by enhancing the difficulty which new institutions have in attracting and retaining high quality staff.

22. The Society recommends that an institution be entitled to a mid-term review for any department which a “light touch” assessment (Roberts, 2003, para 90) has deemed likely to achieve a sufficiently high standard for a full review within three years.

April 2004

APPENDIX 7

Memorandum from the Wellcome Trust

1. The Wellcome Trust believes that there are two issues of concern for this inquiry to examine, namely:

- the research assessment methodologies employed; and
- ensuring that the related funding models provides the right drivers to promote world class research in the context of universities that also deliver world class teaching.

2. The Trust, in its response to the Funding Councils’ recent consultation on the future of research assessment, has highlighted how the past RAEs and the formula by which research funding is distributed have provided perverse drivers to:

- increase research volume at the expense of investment in research infrastructure;
- promote short-term research strategies;
- create pressure for short-term research results;
- encourage appointment of lecturers at the expense of support staff;
- devalue work by teams; and
- devalue teaching.

3. Furthermore, the Trust questioned the comparability of assessment between different subject areas in the past RAEs, with variations in the criteria used between individual assessment panels. It is the Wellcome Trust’s view that the research process differs between disciplines and measures need to be developed that are subject specific and fit the needs and opportunities of particular assessment areas.

4. The Trust also highlighted how the previous RAEs failed to protect or reward small centres of excellence within a larger research unit and have often led to the demise of such groups.

5. We also noted the problems following the 2001 RAE, where institutions have seen dramatic changes in their levels of funding with no or only minor changes in their research quality. The Trust believes that the reduction in funding for 4-rated departments following RAE 2001 will have a detrimental effect on many biomedical disciplines, including clinical medicine.

6. The Wellcome Trust therefore supports a number of the proposals for RAE 2008 which addresses some of these issues. Specifically, the Trust endorses the:

- promotion of group submissions;
- system of continuously graded quality profile for departments which should prevent the overall level of a department being brought down as a result of un-rated staff, and help protect and reward small centres of excellence;
- identification of discipline-specific metrics and the creation of broad subject panels that will ensure that processes are applied consistently across the sub-panels; and
- maintenance of submission of four outputs (or less) per individual to drive the quality, as opposed to the volume, of research outputs.

7. However, we have serious concerns over how the results of RAE 2008 will be utilised in the allocation of research funds. It is our belief that the level of research funding is already highly selective and should not become even more so. Should the results of RAE 2008 be used to focus research funds even further, there will be a real risk of reduction in competition and stagnation in quality being built into the system.

8. The Trust therefore questions whether there is now a need for a fundamental review of research assessment and funding allocation processes. The priority should be to identify how a department that is fit for world-class research and teaching is structured. The research assessment and funding methods should then be modelled to promote such departments.

9. It is vital that the funding method provides support for teams and infrastructure and ultimately provides funds to departments that are fit for purpose. The details of how the proposals for RAE 2008, and the subsequent allocation of funding, are carried forward are yet to be worked out. We will await further announcements by the Funding Councils with interest.

April 2004

APPENDIX 8

Memorandum from the UK Computing Research Committee

UKCRC

The UK Computing Research Committee (UKCRC) is an Expert Panel of the British Computer Society, the Institution of Electrical Engineers and the Council of Professors and Heads of Computing. It was formed in November 2000 as a policy committee for computing research in the UK. UKCRC members are leading computing researchers from UK academia and industry.

THE PRESENT INQUIRY

The House of Commons Science and Technology Committee has invited submissions to the inquiry on the Funding Councils' proposals, and said that these should consider whether the new scheme will provide a robust and reliable system of research assessment, the burden and cost it places on higher education institutions and the implications for higher education more generally. UKCRC is pleased to respond to these questions.

OUR EVIDENCE

UK research has changed almost beyond recognition in the past twenty-five years. Whereas it used to be normal for a new researcher to take time to investigate several possibilities and to read and discuss widely before deciding on a field and line of research, now they are under pressure to produce publishable results quickly and to keep the stream of publications flowing. The best research is done when good people have space—it can take years to get ideas to the point where they should be published or patented or used. It takes even longer if someone has to cross disciplines, or to branch out into an entirely new area. This space is no longer available, and the consequence is an increasing focus on safe, incremental research and an unwillingness to cross discipline boundaries or to explore adventurous ideas that may not lead to publishable results. The original RAE contributed to this change, by focusing on recently published research and thereby compelling researchers to maintain a stream of publishable work. The Funding Councils' proposals will not relieve this pressure.

We recognise that the previous environment had weaknesses: some researchers were unproductive and Heads of Departments had very few means by which to influence their colleagues' behaviour; some Departments had incoherent research strategies; and it was difficult for the Funding Councils to assess whether their funding was going to the right universities and achieving the greatest return. The RAE provided some solutions to these problems, but with substantial overheads. UKCRC members are divided on whether the effect of the RAE has been positive or negative overall.

We accept that there has to be some means of assessing the relative strengths of research groups, and the RAE seems to be the best that the academic community is able to devise. Whether the new RAE structure will be an improvement on the old depends on the panel structure, the criteria that panels will employ, and the relationship between the RAE profile gained and the funding that is awarded. These details are crucial in determining the behaviour that will result: for example, whether researchers will consider that there is greater personal advantage in collaborating and bringing on junior staff, or in publishing single-author papers. It is essential that the opportunity to improve the criteria is taken, and that due credit is given for older articles whose significance has recently been recognised, for patents and novel artefacts (software and hardware), for single papers of outstanding quality, and for papers delivered to prestigious conferences and workshops. Conferences and workshops are particularly important in rapidly developing subjects such as computing, where researchers often decide to present important results at conferences rather than suffer the delays inherent in journal publication.

For all these reasons, we believe that it is essential that panels and sub-panels are free to choose the assessment criteria that are most appropriate for each discipline. We further believe that over-reliance on metrics and formulae will lead departments to optimise for the metrics and not for the quality of research; we therefore hope that the assessment criteria will retain a strong element of judgement and that panel members are selected from the most highly respected researchers in the discipline.

The old RAE has improved research quality overall—in part by giving Heads of Department new management tools—and the funding structure used by the Funding Councils has redistributed the available money towards elite departments. We support this redistribution of funding but we believe that it has gone far enough: there must be sufficient money for research outside the elite group to support the development of new ideas and talented researchers wherever they may emerge.

We understand that, under the new rules, the ratings of individual researchers will not be disclosed. We believe this is essential to maintain collegiate and open behaviour within research groups, but we wonder if the position will be able to be maintained in the face of challenge under the Freedom of Information Act, the Data Protection Act and the Human Rights legislation. For these and other reasons, strict confidentiality is unlikely to be attainable, and the effects of individual ratings becoming known may do more harm to research, through undermining morale and creating divisions inside research teams and departments, than the rating process does good in raising research quality. The issue of absolute confidentiality is sufficiently important that it must be resolved before the decision to assess individual researchers is set in stone.

The International Review of Computer Science Research, commissioned by OST, EPSRC, the Royal Society, BCS and IEE, and published in 2002, made this assessment:

Computer science in the UK has traditionally been of the highest quality. However, while the UK remains a world leader in some research areas and is a strong participant in many others, this position is by no means assured. Declines in certain fields are already evident; more will follow, given the current levels of support and the nature of today's university research environment. The consequences could be far-reaching. Computer science is not only an academic discipline offering deep intellectual challenges; it is also a discipline where research results can translate into competitive advantage and economic well-being on a local, national, and international scale.

This assessment was made at a time when the RAE results in Computing were at their highest ever, implying that the improvement in the UK had been surpassed by major international competitors. Somehow, the research assessment criteria and the funding that follows the assessment must reverse this relative decline.

April 2004

APPENDIX 9

Memorandum from Research Councils UK (RCUK)

INTRODUCTION

1. Research Councils UK (RCUK) is a strategic partnership set up to champion the research, engineering and technology supported by the seven UK Research Councils. Through RCUK the Research Councils are working together with the Arts and Humanities Research Board (AHRB) to create a common framework for research, training and knowledge transfer. RCUK was launched on 1 May 2002 and further details are available at www.rcuk.ac.uk
2. The RCUK Strategy Group leads this partnership. The members of the RCUK Strategy Group are the Research Councils' Chief Executives along with the Director General of Research Councils; the AHRB Chief Executive attends meetings as an observer.
3. This memorandum is submitted by Research Councils UK on behalf of all the Research Councils and the AHRB, and represents our independent views. It does not include or necessarily reflect the views of the Office of Science and Technology (OST).

RCUK RESPONSE TO INQUIRY

PRINCIPLES

4. Research Councils wish to underline the important role that the RAE has in driving research behaviours. Our expectation is that the research assessment process should drive the development of a strong environment for research in universities that meets the needs of knowledge generation and of the UK economy and society.
5. The views that Research Councils express below relate specifically to the document published by the Funding Councils⁵, in February 2004, on its initial decisions for the 2008 RAE⁶.

⁵ Higher Education Funding Council for England, Scottish Higher Education Funding Council, Higher Education Funding Council for Wales, Department for Employment and Learning Northern Ireland.

⁶ See www.rae.ac.uk/pubs/2004/01/rae0401.pdf

FRAMEWORK FOR RESEARCH ASSESSMENT

6. On the basis of the recommendations in last year's consultation exercise, Research Councils had anticipated that the approach to the next RAE would incorporate significant innovations in relation to past exercises. However, we note that, for three important issues, there appears to have been some shying away from the introduction of radical reforms:

- 6.1 The decision not to allow institutions to choose between assessment routes and thereby to abandon the proposal to introduce a 3-track assessment process⁷ misses an opportunity to streamline the process and make the effort involved more proportional to the financial allocations involved. However, it does avoid the problems of dealing with pockets of research excellence in less research intensive institutions and the problem of identifying appropriate metrics to implement light-touch assessments.
 - 6.2 During the consultation, Research Councils had strongly endorsed the broadening of the research assessment process, notably through the careful development and consideration of institution-level strategies as part of the assessment process—such broadening would have been an opportunity to create a bridge between the Funding Bodies' retrospective approach to research funding and the Research Councils' prospective approach. Our initial submission suggested that the driver for the RAE should be to create a healthy research environment that supports and promotes high quality research and helps lay the foundation for future research excellence. To this end, we suggested that such factors as:
 - a collaborative team-based approach to research;
 - multidisciplinary research;
 - a proactive relationship with research users;
 - the provision of high quality research training;
 - research governance;
 - knowledge transfer;should be encompassed within a clear institutional strategy. We are disappointed that such broadening, as initially proposed through the assessment of institutional competences, now appears to have been abandoned. Recognising this, we would nevertheless like the new system to ensure that departmental strategies and their implementation constitute a serious and credible criterion in the assessment of the research environment.
 - 6.3 Research Councils believe that the contributions made by researchers in promoting and communicating the outcomes of their research should also be recognised as an assessment factor, in recognition of the importance of research and society issues. This is also an element missing from the RAE2008 document.
7. Research Councils support the principle of setting up a system of panels and sub-panels. We look forward to working with the Funding Bodies on defining in detail the nature and scope of the sub-panels (see also paragraph 15 below on cross-disciplinarity).
8. Research Councils welcome the inclusion of users on panels; it will be important to ensure that those selected cover the full range of users for each panel's research, to reflect the respective needs of the various research communities. We are also pleased that there will be international members on panels and hope to see them play an enhanced role; we believe that international members are essential to ensure systematic benchmarking of international excellence.
9. Research Councils support the decision to introduce a quality profile and welcome the decision to move from the 3-star system originally proposed to a 4-star system; this will give better discrimination. We note that definitions of these star quality levels are to be announced later in 2004; these criteria will need to be very carefully defined.
10. In the response to last year's consultations, Research Councils had indicated their preference for the revised RAE to be carried out in 2008–09. This is because of concerns about the amount of time needed to implement the reforms during a period of intense activity stemming notably from the implementation of Dual Support reform, and the difficulties inherent in complying with newly-established practices. Research Councils are disappointed that these concerns do not appear to have been addressed.
11. Research Councils agree that the RAE should subsequently take place at six-year intervals.

SUBMISSIONS

12. Research Councils believe that more clarity is required about how the research quality profiles will be translated into financial allocations; we are concerned that the RAE2008 document does not address the critical issue of how funds will be allocated between institutions and subjects. The next RAE must reduce the potential for "game-playing" and avoid creating perverse incentives. For instance, it is important to

⁷ Full-on RAE, light-touch research capacity assessment, different arrangements for the least research-intensive institutions.

establish what weighting will be given to the different star levels and whether the number/proportion of eligible staff not submitting to the RAE will have any effect on the financial allocation. We also believe that there is a need for tighter control about which researchers will form part of a departmental submission.

13. Research Councils note and welcome the approach to equal opportunities, but question how this will be effectively monitored if no demographic information is collected about those staff that are not submitted to the RAE.

14. Research Councils welcome the recognition of the issue of collaboration across institutions, and we endorse the decision to allow joint submissions between two or more institutions, with the institutions indicating their respective shares of the work described.

15. In addition, Research Councils feel that the challenging issue of how to deal with cross-disciplinary research is not addressed directly (bearing in mind that we have recognised the need for Universities to implement more flexible, delivery-oriented funding and organisational models for stimulating cross-disciplinary research). This could be tackled through the composition of the panels and sub-panels, or through horizontal links/joint working between sub-panels.

ASSESSMENT PROCESS AND OUTCOMES

16. Research Councils and, importantly, the wider research community, look forward to the opportunity of advising the Funding Councils on the development of a panel and sub-panel structure⁸ (which should be flexible enough to allow a fair assessment of cross-disciplinary research), a template for panel membership, a procedure for appointing panel members, the development of discipline-specific assessment criteria and criteria for assessing applied research. We also call for transparency both in the process of making appointments to the panels/sub-panels and to the setting out of the assessment criteria.

17. It is important to ensure that the sub-panels interpret and implement the assessment criteria in a consistent manner. Research Councils had strongly supported the suggestion of setting up each panel with a moderator to ensure consistency of practice across the sub-panels. We are disappointed that the proposed moderating mechanism no longer figures in the RAE2008 document. Effective moderation is vital to ensure consistency of practice by different panels and sub-panels, and to maintain common standards (at the same time, we welcome the decision to abandon the idea of providing panels with guidance on the expected overall distribution of quality star gradings, which would have reduced discrimination). We note that the document now calls for the moderating role to be played by the panel chairs; we have some concerns about this as it could compromise their role as chairs.

18. Research Councils welcome the intention to recognise excellence in applied and practice-based research. We believe that every effort should be made to apply this principle consistently across the panels and sub-panels, ensuring that, while the varying characteristics and requirements of the different research communities are respected, standards of excellence are always applied.

19. Research Councils welcome the move away from a research capacity assessment driven by metrics, towards the use of quantitative indicators appropriate to each discipline; we welcome also the practice that any metrics to be used will already be available or collected through other routes so as to minimise the extent of new data collection.

20. Research Councils do not see any evidence to suggest that the revised RAE will be less burdensome than previous exercises.

CONCLUSIONS

21. Research Councils welcome the effort that has been put into setting out a revised framework for the next RAE and we are pleased to have been given the opportunity to provide input through the consultation that the Funding Bodies ran last year. However, we note that the changes contained in the RAE2008 document are not as fundamental as had been recommended (see in particular paragraphs 6, 10 and 17 above), and we are therefore doubtful that not all of the weaknesses identified in previous exercises will be addressed. Given this, we feel that the key to the success of RAE2008 lies in the precise way that it is implemented. There is still much to be resolved, and we look forward to working with the Funding Bodies as they continue to develop the process for RAE2008.

April 2004

⁸ One particular concern from the Medical Research Council's perspective is that panels/sub-panels should reflect research categories rather than traditional medical specialities.

APPENDIX 10

Memorandum from The Royal Society

We believe that the proposals are a significant step forward, but that further work needs to be done, particularly in testing out further changes that could be introduced to simplify the exercise after 2008. It is the Society's view that measures must be taken to reduce the administrative load that currently burdens academics.

The Society has published a number of documents on the development of university research policy since the start of 2002. These include an input to the Committee on its previous consideration of the RAE (RS2002a), input to the Roberts Review of the RAE (RS2002b) and to the subsequent consultation on the Roberts proposals (Roberts 2003, RS 2003a). Most recently the Society published a call for a radical review of the long-term future infrastructure funding of university research (RS2003b). Other relevant publications include a response to the HE White Paper (RS2003c), and to the OST consultation on its proposals for improving the sustainability of university research (RS2003d).

We support the Funding Councils' proposal for one single assessment method for all participating HE Institutions on a 6 year cycle, without the mid-term review that was proposed by Roberts. We also welcome the Councils' commitment to secure better representation on panels of people with personal experience both of conducting research and of its commercial, industrial and public service applications, and to ensuring that applied and practice-based research are not disadvantaged by the exercise, in line with statements made in the Lambert review (Lambert 2003).

The change with possibly the greatest implications in the Councils' proposals is the new four-star system to rate research quality and hence produce a profile for each assessed unit that is continuous, compared with the major discontinuities in funding levels at the various rating boundaries used in previous assessments. The Society proposed a profiling arrangement in its submission to the Roberts Review (RS2002b) and pushed for a four star rather than a three star system in its response to Roberts (RS2003a). We believe that such a system should significantly reduce the pressure on individual researchers and general university administration for two reasons:

- Each researcher adds a discrete, but small contribution to the profile, so there is less pressure on individuals and the university to ensure that the entire submission is put in as good a light as possible. Under the previous arrangements a problem with a single piece of evidence might mean the difference between grades for a whole department, with significant financial penalties.
- It is not necessary to decide which members of staff to exclude. The need to decide whom to include in the previous RAES has caused problems, including a lack of motivation and unity in departments.

The profiling system should result in less time and effort spent on "game-playing" since the reduction in the difference in financial rewards would not warrant it.

Since we hope that the new proposals will reduce the pressure on researchers and administrators, we were surprised that HEFCE's own impact assessment of the new proposals has assumed that the costs of the new RAE for Higher Education Institutions will be similar to that in the RAE 2001 exercise (HEFCE 2004b). On the other hand, as the assessment continues to be based on a major peer review arrangement it should be recognised that this aspect is costly not only to the funding bodies, but also to the universities, as academics constitute a large proportion of the panels.

The elimination of the step changes in funding between grades should also help to decrease the pressure on universities to employ staff that can immediately contribute to the RAE. Consequently, the claimed disadvantage previously experienced by young researchers and researchers who had taken career breaks or work part-time should be reduced, although more still needs to be done on matters surrounding career structures for these groups. The reduction in pressure on individual researcher's time should also mean that there are fewer restrictions on engaging with the local community through representation on boards of local organisations or through communicating the results of their research.

It should be noted that the new profiling system is likely to result in some "winners" and "losers" among departments, if the amount of money distributed by the RAE remains the same. Departments that just scraped into grades in the last RAE are likely to receive less funding, whilst departments that fell just below grade boundaries should receive more funding than in the past. It should also mean that departments currently rated 3 or 4 that contain pockets of excellence would receive more funding than in the last RAE. In the majority of universities the differences in funding should counterbalance each other and the overall funding should not change significantly. However, it will be important to model the effect of the changes on universities and especially on those universities with the strongest research portfolios.

Despite the significant improvements in the new RAE, there remain problems in a number of areas. The Funding Councils recognised that one of the main points arising from the consultation was the need for the assessment process to be designed better to recognise excellence in fields crossing traditional discipline boundaries, yet there is no mention of how the assessment of multidisciplinary work can be improved in the document on the funding bodies' initial decisions (HEFCE 2004a). The issue is briefly mentioned in the document on panel configuration and recruitment (HEFCE2004c) and the funding bodies are currently

"considering the best way forward". Since multidisciplinary research is becoming increasingly important we await the proposals on how the multidisciplinary research assessment is to be improved. Similarly, the Councils have recognised the problem of multi-institutional collaboration, and again we await their detailed proposals.

The Society believes that next RAE would be an ideal opportunity for testing other simpler mechanism(s) for quality assessment in parallel with the new scheme. As mentioned in our previous responses, it might be possible to devise a more metric-based system, with the capability of devising different parameters for each discipline based on one or a few metrics, such as peer reviewed grants, access to central facilities, research income from business and Government departments and possibly bibliometrics. We recognise that these measures have different importance across the disciplines. Any such system would still require an element of peer review to agree the procedures and validate the results, but this should be significantly less burdensome than the system required for RAE 2001, or for the profiling arrangement in 2008. Experimenting with such mechanisms now would allow the results to be compared and the potential advantages and disadvantages of less burdensome and costly mechanisms to be identified. A decision on the future of the RAE post 2008 could then be based on evidence.

April 2004

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All Royal Society policy reports are available on line at <http://www.royalsoc.ac.uk/policy/>

APPENDIX 11

Memorandum from the Higher Education Funding Council for England (HEFCE)

WHAT IS THE RESEARCH ASSESSMENT EXERCISE?

1. The Research Assessment Exercise (RAE) is the process by which the UK Higher Education funding bodies establish the quality of research undertaken in university departments. The next RAE will be held in 2008. It will build upon previous exercises but will incorporate significant reforms designed to address concerns expressed by the sector, the committee and others.
2. The assessment is undertaken by expert review panels each with expertise in a specific subject area or group of subjects. For 2008 it is proposed that there should be approximately 67 subject panels whose assessments, will, for the first time, require the approval of 14 "main panels" each responsible for a group of subjects⁹.

⁹ RAE 2008 02/2004 Panel configuration and recruitment.

3. Higher education institutions (HEIs) are invited to make submissions to as many UoAs as they choose. Submissions are made in a standard format. Institutions are asked to provide the names of staff (“research active staff”) they wish to enter in each UoA, and up to four research outputs for each person. In making their assessments, panels are allowed to consider only those research outputs mentioned in the submission and the other data requested by the exercise, which in 2001 included information about research income, research student numbers and an account of the institution’s research strategy.

4. There is no upper or lower limit on the number of UoAs an institution can submit to. Nor is there any upper or lower limit on the number of staff submitted as research active. The RAE assesses the quality of an institution’s research not the pervasiveness of research throughout the institution or department¹⁰.

5. In previous RAEs, results have been expressed in the form of summary grades. In the two most recent exercises (1996 and 2001), a 7 point scale was used (with 1 being the lowest through 2, 3b, 3a, 4, 5 and 5*). For 2008 it is proposed that grades be abolished in favour of a “quality profile”. Instead of receiving a grade, each submission will receive a “quality profile” showing how much research falls into each of four quality bands. This will provide a much more detailed background, as the following (fictional) example illustrates:

2001 Grade: 5

2008 Profile:

Unit of assessment A	FTE staff submitted for assessment	Percentage of research activity in the submission judged to meet the standard for:				
		four star	three star	two star	one star	Unclassified
University X	n	15	25	40	15	5

6. The remainder of this evidence addresses specific issues relating to the RAE and the policy of selective funding which it supports.

THE RELATIONSHIP BETWEEN THE RAE AND FUNDING

7. The RAE provides information to the four Higher Education funding bodies on the quality of research in UK departments. Each funding body uses that information to set funding allocations.

8. The RAE is therefore principally a mechanism for producing quality information which various parties (including the funding bodies) use to inform funding and other decisions. It is not a competition for funding in which there is an automatic relationship between performance and funding.

9. The key funding decisions taken by the four bodies relate to the extent of the premium paid for research of high quality (and therefore to the extent to which funding is skewed towards the strongest research departments). A secondary set of decisions concerns the treatment of variable performance between disciplines¹¹ (measured against international benchmarks): the funding bodies must choose whether to divert more funds to recognise achievement in higher performing disciplines, to take remedial action to support struggling disciplines or to tread a middle course.

10. It is often asserted that the RAE itself determines funding policy and that changes to the RAE therefore imply that the funding policies of the four UK funding bodies have changed. This is simply incorrect. The RAE is specifically designed not to constrain the decisions of each funding body on the important matters described in the preceding paragraph. Attempts to infer funding policies from the design of the RAE are therefore based on a misunderstanding of the assessment process and its relationship to funding outcomes.

SUCCESS OF THE RAE

11. The 18 years since the introduction of the RAE have been a successful time for British science, both in terms of research competitiveness and of the willingness of government to support scientific research. It is extremely difficult to assess the role of the RAE in these developments but we can at least say that it is a fundamental pillar of a system which seems, according to those indicators, to be working well.

12. In one respect the success of the RAE is unarguable. It is seen—both within the UK and abroad—as the definitive indicator of the quality of research within UK HE.

¹⁰ The amount of research submitted to the RAE is used alongside the quality assessment to determine funding allocations by all the funding bodies. There is, therefore, a natural trade-off: institutions and departments which submit only their strongest researchers may register higher average quality but they will not be funded for the same volume of work as they would have been had they included more staff in the assessment.

¹¹ The funding bodies support institutions rather than disciplines or departments. Funding is provided in the form of a block grant which the institution can spend as it chooses. It would however be naïve to deny that institutions are often reluctant to redistribute funds “won” by one department to another—and indeed it is rational to invest in units with a track record of attracting revenue. Therefore if the amount of funds “won” by departments in a given subject declines, it is reasonable to assume that this will make institutions less willing to support research in that subject.

SUPPORT FOR THE RAE

13. In 2000 98% of respondents to the HEFCE's Fundamental Review of research policy expressed support for retaining a process of research assessment based on peer review¹².
14. In 2003 95% of respondents to the consultation on Sir Gareth Roberts Review of research assessment agreed that "any system of research assessment designed to identify the best research must be based upon the judgement of experts, who may, if they choose, employ performance indicators to inform their judgement."
15. These figures demonstrate that there is no significant support for the abolition of the RAE or for its replacement by a system based upon any method other than subject based expert review.

THE RAE AS A UK WIDE PROCESS

16. Conceived when Higher Education throughout the UK was the responsibility of the UK government, the RAE has successfully adapted to devolution. It is now the joint responsibility of the four UK Higher Education funding bodies and is used by each to allocate funding for research in Higher Education Institutions. It is sufficiently flexible that it can inform the different allocation mechanisms operated in the four territories of the United Kingdom.

17. The RAE provides the opportunity for each territory within the UK to benchmark its performance against UK and international norms. The move from grades to a quality profile will further improve the quality of the information provided by the RAE process as it will be possible to establish exactly how much research activity is of the highest quality and where it is to be found.

18. We note that as Higher Education research is funded through both the HE funding streams of the four territories and the UK science budget, one component of government support is devolved and the other is not. The RAE provides an element of coherence in the system providing both a shared basis for funding decisions between the HEFBs and a shared quality assurance framework.

EFFECTS OF THE RAE

19. We would ask the committee to look critically at claims that either the RAE or the policy of selective funding are responsible for the pressures facing the sector. So long as institutions and academics wish to undertake more research than the available funding can support there will pressures within the system. The fact that the necessary "rationing" both within and between HEIs is focused around the RAE does not mean that the abolition of the RAE would relieve those pressures.

20. Similarly, it is naïve to assume that the abolition of selective funding would relieve those pressures—indeed it would necessitate a radical downsizing of research in our leading research universities. Regardless of any changes made to the RAE or to selective funding and despite the government's strong support for research the competition for research funding will continue to be intense and the system will continue to produce losers as well as winners.

CONSISTENCY OF GRADES

21. It is important that RAE results are seen to be consistent—that is, that a given result in one subject can meaningfully be said to be equivalent to the same result in another. This is important not just for funding (in fact, HEFCE does not distribute funding between subjects on the basis of quality) but also because the RAE provides public information.

22. In a major reform, RAE2008 will, feature a two tier panel structure. Subject panels' decisions will need to secure the approval of a "main panel" covering a number of cognate subjects. We already have reason to believe that this measure, proposed in the Sir Gareth Roberts' *Review of research assessment*¹³ will further strengthen confidence in the results of the exercise.

POCKETS OF EXCELLENCE

23. A common criticism of the RAE in the past has been that it does not recognise small groups of excellent researchers within relatively weak departments where the department had chosen to submit the majority of its staff. This has in the past had the effect of forcing such groups into established centres as a means of enjoying the reputational and financial benefits that their work merits. We have no objection in principle to excellent groups being concentrated in a smaller number of departments where this reflects the genuine advantages which can arise from critical mass but we would not wish diversity to be artificially constrained by the assessment process.

¹² HEFCE 01/17 Review of research: report on consultation.

¹³ HEFCE 2003/22 Joint consultation on the Review of Research Assessment.

24. To address this problem, the funding bodies have radically changed the outputs of the RAE, abolishing the summary grades (1 to 5*) which used to define the research quality of a department. Grades will be replaced by the “quality profile” (see the example above) which sets out the proportion of research activity falling into each of four quality bands. This means that top quality research within less strong departments will become visible—and also that the funding bodies will be able to fund strong research in departments whose average level of performance would not previously have qualified for any support.

INTERDISCIPLINARY RESEARCH

25. The RAE is often presumed to inhibit interdisciplinary research. A 1999 report found no evidence that panels treat interdisciplinary research differently but reported a widespread perception that they did so. It noted that this perception could itself influence the willingness of institutions to support interdisciplinary research¹⁴.

26. It is however difficult to know how to address this. Given the high levels of support for the RAE it is unsurprising that the funding councils receive a great many representations from parties wishing to see a change in the configuration of units of assessment but very few proposing a more radical change in the RAE to accommodate concerns about interdisciplinary research.

27. This leaves the funding bodies with two options:

- (a) To attempt, before each RAE to establish the most rational and current grouping of subjects through analysis of publication data and research proposals and to structure the RAE accordingly.
- (b) To emphasise stability on the grounds that any radical revision to the structure of the RAE will itself result in restructuring across the HE sector with potentially serious effects for staff and students.

28. Whilst recognising that each of these options has its downsides the funding bodies have opted for the second. This is reflected in the units of assessment proposed for the 2008 RAE¹⁵.

29. The funding bodies do, however, recognise the importance of ensuring that all research is assessed by suitably qualified individuals. For this reason we are giving active consideration to Sir Gareth Roberts' suggestion that virtual “colleges of assessors” be recruited in established interdisciplinary areas which do not fit neatly into the RAE panel structure. This will ensure that work is considered by assessors with an understanding of the development of work in these emerging fields.

APPLIED AND PRACTICE BASED RESEARCH

30. The Review of research assessment recommended that panels developing their criteria for assessment should be required to ensure that these included suitable criteria for recognising the characteristics of excellence particular to such work. This reflects in part the criticism of previous exercises, by CBI and others, that they did not give due and equal credit to excellent applied research. It is consistent with the recommendation made subsequently in the Lambert review of business-university collaboration, that excellent research undertaken with industry or other users should be recognised as of equal value to excellent academic research and that assessment processes should be designed explicitly to ensure that this is achieved.

31. The 2008 RAE will insist, as Roberts recommends that panels ensure that criteria are sufficiently flexible that all types of research excellence can be recognised. The key, though, will be to ensure that panels include individuals capable of discriminating between high and low quality examples of these types of research. HEFCE is working on an illustration of the issues panels will need to address in drafting criteria in five sample subject areas. It is planned that this illustration will be considered by the UK ministerial group on implementing Investing in Innovation.

Cost

32. The RAE provides information used by the funding bodies to drive funding allocations and providing accountability for research funding from the funding bodies and others. These, however, are not its only functions. It also:

- encourages a focus upon research of the highest quality within institutions
- stimulates strategic management of research within institutions
- provides quality assurance and data which institutions would otherwise require for managerial purposes

33. Calculating the opportunity costs of the RAE is complicated by the fact that many (some would say most) of the resources institutions devote to putting together RAE submissions reflect these beneficial stimuli. For example, HEIs are required to take strategic management decisions and to discuss research

¹⁴ RAE 1/99 Interdisciplinary research and the Research Assessment Exercise.

¹⁵ RAE 02/2004 Panel configuration and recruitment.

aspirations with staff as part of the RAE and, whilst this process does add to the cost of putting together RAE submissions, it produces benefits which go beyond the RAE itself. What is more, if there were no RAE, HEIs would still need a means of prioritising the research aspirations of their departments and researchers (assuming they could not support them all).

34. The scale and cost of the additional activity that HEIs have judged it appropriate to undertake in preparing for previous exercises are certainly significant. The cost of the 1996 RAE has been estimated at between £30 million and £37 million and it is likely that the costs of RAE2008 will exceed this. However:

- (a) If we accept that the whole of this spend was necessarily incurred, it still represents not much over 1% of the resources to be distributed by the funding bodies in the period 2002–03 to 2008–09 using the ratings. This is well below the proportionate cost of research grant allocation systems based upon bidding for projects (for example those used by the Research Councils)¹⁶.
- (b) Research quality assessment is an essential tool to provide assurance that the considerable public funds spent on research in HEIs are being put to good use. Expert review done to the necessary standard is labour-intensive, and the main cost driver is the numbers of individual submissions and staff to be assessed rather than the design of the process.
- (c) It is likely that much of the activity identified in our latest costing study would have been undertaken anyway by well-managed institutions planning and reviewing their research effort. Moreover, it is clear that some HEIs perceive a need for significantly more preparatory work than others; and there is some evidence that institutions with lower volumes of research tend to prepare more carefully than others, as well as incurring higher fixed costs by making larger numbers of small submissions. To this extent one could reasonably argue that the true additional and unavoidable cost to HEIs is well below the figure quoted above.

35. We have also undertaken a regulatory impact assessment of the review proposals against both the evaluation tests codified by the Cabinet Office Better Regulation Task Force and the principles of better accountability developed by the HE Forum on Better Accountability (now superseded by the Better Regulation Review Group). This assessment has been published on the RAE website (www.rae.ac.uk)

EQUAL OPPORTUNITIES

36. The funding bodies are aware of concern around the treatment of women by institutions putting together RAE submissions (although we are not aware of specific cases where malpractice has been proven). They accept that they have two related responsibilities:

- (a) To ensure that RAE panels do not make assessments which penalise institutions for submitting women (or minority groups)
- (b) To ensure that institutions are accountable for any failure to treat staff appropriately in deciding which staff to submit for the RAE.

37. To this end three provisions¹⁷ have been made for RAE2008:

- (a) Panel members and secretaries, and the RAE management team, will receive training and guidance on equal opportunities issues.
- (b) Main panels and sub-panels will be required to ensure that institutions and departments can take full account of equal opportunities issues in preparing their submissions, in full confidence that this will not have a negative impact upon the outcome. This is likely to include making provision for institutions to identify cases where an individual researcher's personal circumstances have affected his or her productivity and personal development as shown in the submission.
- (c) Institutions will be required to confirm that they have developed and applied an appropriate internal code of practice in preparing their submissions and in selecting staff for inclusion in these. They will be asked to certify that this code has been communicated to their staff. This will remove any doubt that institutions are expected to respect principles of equality of opportunity in constructing RAE submissions.

38. The funding bodies have published advice received from the Equality Challenge Unit¹⁸ on the proposals of the Review of Research Assessment. This advice will continue to inform the development of RAE2008 as the rules are finalised over the next 18 months.

April 2004

¹⁶ The Higher Education Policy Institute has estimated the compliance costs of HEFCE QR funding (including the RAE costs) at 1.1% and research council compliance costs at "at least" 4.76%.

¹⁷ This list is adapted from RAE 01/2004 Initial decisions of the funding bodies.

¹⁸ Available at www.rae.ac.uk

APPENDIX 12

Memorandum from the Association of University Teachers

1. INTRODUCTION

1. The following submission will focus on the union's responses to the *Joint Consultation on the Review of Research Assessment* and particularly the *Initial Decisions by the Funding Councils*.¹⁹

2. BACKGROUND

In our previous submission to the select committee, the AUT outlined strong objections to the RAE as currently constituted. We pointed out that "our members' experience of research selectivity in the context of funding cuts has been overwhelmingly one of divisiveness, unfairness and demoralisation".²⁰ Although we await the final recommendations for the 2008 exercise, it is difficult to envisage the new system leading to a qualitatively different outcome.

One of the reasons for this pessimism is that the assessment proposals should be viewed in the context of research funding as a whole. In our submission to the select committee, we argued that research funding was already too concentrated and any additional selectivity risked undermining the intellectual culture across the national university system. Unfortunately, alongside the HEFCE report on research funding²¹ and the Office Science Technology²² proposals to change the dual support system, the new RAE is likely to exacerbate the problem, resulting in a loss of innovation and creativity as research becomes unduly concentrated in very few institutions. These policies will fail to sustain "world-class research" because they risk killing off the sources of academic creativity in departments rated 4 and below. This situation is putting much valuable research at risk, and undermining the government's policies of enhancing regional research collaboration between universities, and of developing links between universities and the businesses in their regions.²³ There are very persuasive arguments to be made about the importance of maintaining a broad institutional research base within UK higher education, both to ensure that the variety and volume of research activity required to meet the nation's needs is undertaken, and to ensure the ability of our institutions (rather than just a small group of them) to attract and retain high quality, motivated staff. We fear that the current proposals are unlikely to guarantee a broad institutional research base.

3. INITIAL DECISIONS BY THE UK FUNDING BODIES

The report published on 9 February is fairly broad brush. Key decisions such as panel criteria and crucially, levels of funding, have yet to be decided so it is difficult to make a definite judgement at this stage. At the same time, the AUT welcomes some of the changes made to the original Roberts proposals. In particular, we support the abandonment of the tiered system of assessment (RQA/RCA) and the removal of additional levels of bureaucracy, such as mid-point monitoring. But we continue to have significant reservations about the details, particularly the decision not to publish the levels of funding attached to the quality profiles. Moreover, the proposals appear to be in line with the highly selective research funding model and stratified HE regime outlined in the higher education White Paper.

4. TIMETABLE

In our evidence to the select committee, we recommended if not the abandonment of the RAE in its current form, then the postponement of the next exercise. In response to the Roberts report, we called for a longer cycle than six years.

Whilst there is some logic in establishing the next RAE to coincide with the rhythms of the Government's Comprehensive Spending Review, the 2007–08 timetable is a tight one. The Initial Decisions paper is very much a preliminary report and a number of the key proposals such as assessment criteria, performance indicators and panel composition, require detailed work as well as proper consultation with the sector. Given that we are already into the third year of the next cycle, the proposed timetable leaves HEFCE and the other funding councils with a considerable amount of work to get the new system up and running by 2007–08. As stated above, we believe that a longer cycle should be employed.

¹⁹ Higher Education Funding Council for England et al (2003) *Joint consultation on the review of research assessment*, consultation by the UK funding bodies on the review by Sir Gareth Roberts, http://www.hefce.ac.uk/Pubs/hefce/2003/03_22.htm; Higher Education Funding Council for England et al (2004) RAE 2008: *Initial decisions by the UK funding bodies* <http://www.rae.ac.uk/pubs/2004/01/rae0401.pdf>

²⁰ Association of University Teachers (2002) *Memorandum of evidence to the inquiry into the research assessment exercise*, AUT: London.

²¹ Higher Education Funding Council for England (2003) Review of research funding method, HEFCE: Bristol http://www.hefce.ac.uk/Pubs/hefce/2003/03_38/03_38.pdf

²² Office Science and Technology (2003) *The sustainability of research: a consultation on reforming parts of the dual support system*, DTI: London. <http://www.ost.gov.uk/policy/universityresearch.pdf>

²³ Universities UK (2003) *Funding research diversity*, UUK: London. http://www.universitiesuk.ac.uk/bookshop/downloads/funding_tech.pdf

5. PEER REVIEW

If the RAE is to continue in any form, then peer review must remain central to the assessment process. In this context, we support the decision of the funding bodies to allow all institutions, departments and subject centres to have the opportunity of entering into a peer review of their research outputs. This change from the original Roberts proposals is to be strongly welcomed.

6. QUALITY PROFILES

In general, the proposed “quality profiles” appear to be a more sophisticated output than a crude numerical score. However, the proposals are short on detail (for example, will the new system essentially reward small numbers of “world-class” performers or collective departmental effort?). We therefore look forward to receiving more information as to how the “star” ratings will work in practice, including how the system will guarantee the confidentiality of individual academics.

One of the main problems with the RAE is its lack of transparency, including in relation to funding ratios. As a result, the AUT believes strongly that the funding levels for the different “star” ratings must be published prior to the exercise (as suggested by Gareth Roberts). This will help to avoid a repeat of the 2001 débâcle, when the Government decided not to fully fund the improvements in quantity and quality that were revealed in the RAE results. It is disappointing that the funding bodies have rejected the original Roberts proposal.

7. EXCLUSION AND DIVISION

Previous assessment exercises helped to promote a harmful distinction between those whose work was submitted for assessment and those whose work was not. The AUT strongly agrees with the recommendations of the Science and Technology select committee that:

“Any future research assessment mechanism must be able to give a fair appraisal of the research without tempting universities to continue the divisive and demoralising practice of excluding some academics from the process (paragraph 41).”

It is to be hoped that the new quality profile will minimise incentives to exclude individual academics. But we believe that more could be done to prevent this pernicious form of tactical “games playing”. For example, we believe that there should be nationally agreed code of practice on research assessment involving the funding councils, Universities UK and the trade unions. This might look to set national benchmarks or threshold standards in key areas such as equal opportunities. Also, from the start of the RAE, the AUT has argued that for legal as well as ethical reasons there should be a right of appeal against RAE assessments and believes that changes to the system present an ideal opportunity to incorporate such a right.

The RAE has particularly disadvantaged contract research staff (CRS). Consequently, we strongly welcome the recommendations of the select committee report into short-term contracts, and in particular that the current review of higher education research assessment must ensure that whatever follows the RAE does not disadvantage contract research staff.²⁴ The Joint Consultation document, published by Gareth Roberts in May 2003, said that “all staff eligible to apply for grants from the research councils should be eligible for submission to Research Quality Assessment.”²⁵ Whilst this is a small step in recognising the contribution of contract research staff, it would only help those researchers who are funded by the ESRC and the MRC. The other research councils continue to deny CRS the opportunity to be a grantholders or principal investigators. The funding councils and the Research Councils need to work together to refresh both the mission and the methodology of dual funding so that the funding climate supports the active participation of contract researchers.

8. ASSESSMENT CRITERIA

The AUT is currently consulting our members on the recently announced proposals for panel structure and membership. We welcome attempts to ensure greater consistency among panels and to allay concerns about the impact of the RAE upon interdisciplinary and multidisciplinary research. The crucial need is to ensure that the research assessment mechanism is responsive to academic developments. Most importantly, the new panel structures must be capable of adjusting their assessment arrangements in response to the emergence of new research disciplines within subjects.

In relation to assessment criteria, we welcome the decision to abolish the four items rule and to allow different panels the freedom to define their own limits on the number and size of outputs. Our preference would be for a minimum number of items and that any maximum should be set at a low-level. Having a set

²⁴ Science and Technology Select Committee (2002) *Short-term research contracts in science and engineering*, eighth report of session 2001–02, HC 1046 (para. 91).

²⁵ HEFCE (2003) *Joint Consultation*, p.16.

number of papers discriminates against those subjects which are less likely to publish numerous papers and where the publications tend to be larger. It can also particularly discriminate against women whose research output may be affected by maternity leave, career breaks and domestic responsibilities.

9. IMPACT ON TEACHING AND OTHER ACADEMIC ACTIVITIES

The AUT supports the decision to enable applied and practice-based research to be properly assessed by panels. We look forward to the publication of further detail and consultation as to how this may be guaranteed. The assessment criteria should also be extended to include proper recognition of subject-based, pedagogic research. Pedagogical research that advances knowledge of student learning or introduces new teaching methods should be positively encouraged by the assessment criteria. This should help to strengthen the links between research and teaching, which as the select committee acknowledge, have been undermined by the current RAE.

10. EQUAL OPPORTUNITIES

In our evidence to the select committee, we raised concerns about the impact of the RAE on equal opportunities, particularly in relation to women. In the original *Joint Consultation* document, Gareth Roberts proposed an assessment of research competences, which included objective criteria relating to equal opportunities.²⁶ This assessment has now been dropped by the funding bodies and replaced by a looser set of proposals around equal opportunities training and an internal code of practice (paragraphs 68–70). Although we welcome these initial proposals, as well as the wider set of recommendations in the *Equality Proofing of Research Assessment*,²⁷ we remain sceptical about the capacity of these proposals to improve the situation for women and minority ethnic staff. The main problem continues to be the lack of genuine commitment on behalf of vice-chancellors and the funding councils towards improving equal opportunities. For example, the equal opportunities target in HEFCE'S Strategic Plan is so vague as to be virtually meaningless.²⁸ It is an inadequate response to what is widely recognised to be a major problem in UK higher education.

April 2004

APPENDIX 13

Memorandum from Universities UK

INTRODUCTION

1. As stated during the first inquiry, Universities UK's policy with regard to the RAE relates to research across the board, rather than science and technology alone.
2. Universities UK responded to the *Joint Consultation on the Review of Research Assessment* in 2003 and this response is attached. Also attached is an outline of the key principles that underpinned Universities UK's response to the RAE and dual support consultations. This was developed in an attempt to provide a joined up approach to the various consultations published at the time.

SUMMARY

3. As we stated in our evidence to the Committee in January 2002, Universities UK believes that university research in the UK is a success story and that the dual support system, of which the RAE is a part, has helped to deliver excellence. In our response to the *Joint Consultation on the Review of Research Assessment*, we expressed some concerns over the continuation of research assessment in its current forms and the Roberts' proposals. However, we made it clear that "there are fundamental objections to the need for a 'new' process for assessing basic research capability". For these reasons, Universities UK is generally supportive of the Funding Councils' decision to adjust the existing process rather than introduce an entirely new one.

4. We have broadly welcomed the announcement of the *Initial Decisions* by the Funding Councils. While we note that much of the detail is still to be announced, Universities UK is reassured that a number of the points in the revised proposals reflect concerns outlined in our response to the *Joint Consultation*. We are

²⁶ HEFCE (2003) *Joint Consultation*, p.30.

²⁷ Equality Challenge Unit (2003), *Equality proofing of research assessment*, Higher Education Funding Council for England, Bristol <http://www.rae.ac.uk/pubs/other/equuproof/equuproof.pdf>

²⁸ Higher Education Funding Council for England (2004), *HEFCE strategic plan 2003–08*, HEFCE: Bristol, pp.34 http://www.hefce.ac.uk/Pubs/hefce/2004/04_17/04_17.pdf

reassured that the sector's concerns about the level of bureaucracy imposed by the current system—and potentially by the Roberts' proposals—seem to have been taken on board in the revised proposals for a single assessment process.

5. We are also encouraged by the intention that the 2008 RAE will, in principle, take better account of vital applied, inter- and multi-disciplinary research, although further detail on how this will be achieved is still to be announced. The next RAE needs to provide universities with incentives to submit the work of young researchers whose potential research contribution is yet to be fully realised. We look forward to being involved in ongoing discussion around the RAE review, and responding to further consultation regarding the detail. We are currently consulting our members on the recently announced proposals for panel structure and membership.

BACKGROUND

6. The results of the 2001 RAE exceeded expectations, but the failure of the Government to fund fully the results caused extreme concern to the academic community. In particular, Universities UK has been deeply concerned by the cuts in funding to departments rated 4 and below, and the Government's policy of further concentration of research funding. The White Paper *The Future of Higher Education*, published in January 2003, assumed that the concentration of research would enhance national research performance. This assumption is based on virtually no supporting evidence. By contrast, a study commissioned by Universities UK from *Evidence Ltd, Funding Research Diversity: The impact of further concentration on university research performance and regional research capacity* demonstrated that investment in departments scoring a 4 or 3 in RAE 2001 was important for developing the performance of the research base at regional, national and international levels.

7. In Universities UK's view, the mechanisms for how research is funded and assessed need to be considered together. There is, as yet, no detail as to how funding will be allocated according to the quality profiles to be introduced under the new system. Consequently, Universities UK has stated that it is essential for the funding for the different levels to be reasonably predictable so that higher education institutions can invest and plan within a stable financial framework. We hope that the Government will recognise this as it develops its 10-year framework for science and innovation announced recently as part of SR2004. We remain concerned that the funding of the RAE will continue to be open to retrospective manipulation. In addition, while we have been reassured by Sir Howard Newby's recent statement that the proposals for the revised RAE are not intended as a vehicle for further concentration of research funding, Universities UK will continue to press for a system of funding allocation which reflects the concerns expressed by ourselves and many others on this score. Once again, we would value the support of the Committee in raising this issue with Government.

8. Financial sustainability is also a key issue for universities as institutions move towards the full economic costing of research. QR funding levels are inadequate to support current volume, and there is an enormous strain on this side of the dual support system. This issue is covered in more detail in the conclusion to this note.

9. We are encouraged by the Government's recent announcement of a 10-year framework for science and innovation that will look at these issues as part of a coherent strategy, and will be submitting our response to the consultation document by the 30 April deadline.

INITIAL DECISIONS BY THE UK FUNDING BODIES

10. The Funding Councils published their *Initial Decisions* on 9 February 2004. In its current form this represents a framework for the 2008 RAE, and at present it is difficult to make substantial comments on a number of issues relating to the detailed future operation of the RAE. However, below we have outlined universities UK's views in relation to some of the broad proposals in the document:

- (a) *The four UK funding bodies will continue jointly to assess the quality of work undertaken in UK universities through a regular RAE;*
Universities UK supports this decision.
- (b) *The results of the next RAE will be published in December 2008; and the funding bodies plan to work on a six-year cycle thereafter;*

The 2007–08 date for the next RAE process and the decision to work on a six year cycle seem reasonable, but only if details of the process are known in time for strategic planning to be possible. In our response to the *Joint Consultation*, Universities UK suggested that the details, including panel composition, assessment criteria and performance indicators should be made available early in 2004. We commented that "Under the current timescales there is a fear that time will run out and it is already quite late to be fundamentally revising the rules of the RAE."

- (c) *The RAE will continue to be a discipline-based expert review process in which judgements on the quality of research are made by researchers and experts active in that discipline;*

Universities UK supports the decision to base assessments of research on expert peer-review, but in our response to the *Joint Consultation*, we expressed concern that panels might be too small to provide a broad basis of expertise, and that they may not be suitable for cross-disciplinary and “risk-taking” research. We welcome the acknowledgement of the importance of such research in the *Initial Decisions* and look forward to engaging in discussions with the Funding Councils on this to ensure that such research is assessed in an appropriate way.

- (d) *There will be 15 to 20 panels who will make decisions on ratings based on detailed assessment work done by around 70 sub-panels;*

Universities UK broadly supports this decision. The introduction of structures that will increase consistency in practice is welcome in principle. We have some concerns about the complexity of the proposed system and the potential for it to be time-consuming and burdensome. We are further concerned about the capacity of the system to measure research outputs from multidisciplinary units of assessment and look forward to further detail on this.

- (e) *Membership of panels and sub-panels will include people with experience of commissioning and using research, including industry, commerce and the public sector, and people with experience in research in other countries;*

Universities UK supports the decision to include international experts and users and experts from outside academia. Further clarification is needed regarding the rules for the choice of these experts and we look forward to responding to the Funding Councils’ consultation on this issue. In our response to the *Joint Consultation*, we highlighted the danger that the inclusion of international researchers would be tokenistic, with few international researchers being asked to judge a range of disciplines at panel level. The decision to include international experts at sub-panel level is therefore welcome. We note, however, that the international researchers would have to have a sufficiently good understanding of the UK research system to bring benefit to the exercise. We look forward to responding to the further consultation on panel configuration and recruitment.

- (f) *Quality profiles will be criterion-referenced against clearly defined common standards;*

We agree with this in principle, although it is very difficult to give detailed comment on this proposal at present, as no detail on the level descriptors are currently available. We look forward to further consultation on this.

- (g) *Processes will be applied consistently across different subject areas;*

We support this in principle, and much of the success of this will be dependent on how effective the main panel is in ensuring the sub-panels apply the criteria consistently. This will also be dependent on panel configuration and we look forward to responding to the consultation on this that is currently underway.

- (h) *The assessment process will be designed to ensure that joint submissions are not disadvantaged;*

We are broadly supportive of the introduction of a facility for the submission of group work and look forward to further detail on how the new system will effectively overcome the problems encountered under the current system when two or more institutions submit work that has been undertaken jointly.

- (i) *The new process will be designed to recognise excellence in applied research, in new disciplines and in fields crossing traditional discipline boundaries.*

Universities UK supports the decision to enhance the recognition of applied and practice-based research. We have requested the publication of transparent guidelines to assist this process, so that applied research is properly captured in the metrics employed. However, under the current framework there is very little detail as to how this will effectively operate and we look forward to the publication of further detail and consultation.

CONCLUSION

11. Universities UK supports a number of the key principles outlined in the proposals for the revised RAE, and reaffirms its support for a revision of the existing process, rather than the introduction of an entirely new one. We welcome the fact that the more bureaucratic elements of the Roberts’ proposals have been abandoned, particularly the idea of a mid-point review. We are however concerned with the lack of detail available on many key aspects of the proposals, particularly given the proposed date of 2008 for the next RAE. As we have indicated, details of the process should be available to allow adequate strategic planning to take place.

12. We are broadly supportive of the “profiles” approach, although we are very concerned about the review’s lack of openness regarding funding implications. There is a need for a commitment to openness by HEFCE prior to the submission of entries for the assessment. Previous reviews have been subject to retrospective manipulation and this is not conducive to effective planning in institutions. We call on the government to consider this issue as part of its 10-year strategy for science and innovation.

13. In relation to higher education funding, we are also concerned about the level of selectivity in the system. There is no clear evidence that the UK's research performance would benefit from further concentration. Independent research conducted for Universities UK shows that further concentration would be seriously damaging at a regional level. HE-business interaction (including interaction with the large multi-national companies) is heavily based on 4-rated departments, and the further reduction of the funding for these departments would undermine the role that they play in the economy. It remains to be seen how the "profiles" approach and the new funding methodology will affect the distribution of research funding, but it is likely to remain a key issue for Universities UK.

14. Universities UK strongly believes that the dual support system should continue and that QR funding provides a measure of freedom for institutions in the form of the block grant. However, financial sustainability is a key issue for universities as institutions move towards the full economic costing of research. We support processes to identify the true costs (ie full economic costing FEC), and the additional £120 million provided under SR2002 to support a move towards paying more of the full economic costs of research council projects was a very welcome step towards ensuring the sustainability of university research. Despite this, to achieve both the OST and the Funding Council objectives, it is clear that a larger sum than the £120 million allocated to the OST is needed to ensure that the UK maintains its current position (the present proposals would provide 60–70% of the full costs attributable to each project).

15. QR funding levels are inadequate to support current volume, and there is an enormous strain on this side of the dual support system. It has been estimated by HEFCE that at least £900 million a year is needed for the Funding Council to sustain the current number of project grants in England. As well as supporting Research Council grants, QR is required to support a significant increase in research projects funded by charities and the EU funded projects, particularly the Framework Programmes which are on a cost-sharing basis, as well as being the only form of funding available for institutions to conduct "blue skies" research.

April 2004

APPENDIX 14

Memorandum from the Institution of Electrical Engineers

The Institution of Electrical Engineers (IEE) is the largest engineering institution in Europe with a membership of some 130,000 professional engineers who represent key sectors including electronics, communications, computing, energy, manufacturing, and transport. Many of our members are working in the research sector both as academics and industrialists. This reply is fully supported by the British Computer Society and in addition takes account of general comments from the UK Computing Research Committee (UKCRC), an expert panel of the IEE and BCS. However, because of their particular concerns in certain areas of interest to the committee, the UKCRC has prepared a separate reply. Nevertheless, the IEE is generally content with the Initial Decisions by the UK Funding Bodies (RAE 01/2004) published in February 2004 but has a number of concerns that are outlined below.

ASSESSMENT CRITERIA

The initial decisions support the "principle" that the assessment process should better recognise applied and practice-based research. However, there remains a concern that there will continue to be an overemphasis on publications and theoretical work. In our view it is equally important that assessment recognises the potential for wealth creation, improvement to quality of life, and knowledge transfer. Credit should also be given to previous research that has led to commercial exploitation. There must also be a process that does not disadvantage "blue skies" or "curiosity" research that has yet to generate published material or other mechanisms for defining outcomes.

Despite early announcements of changes to the assessment process, there is also a view that the outcome will still be heavily weighted in favour of individual "scores" rather than a greater rating for teamwork, and that it will be skewed in favour of the elite researchers. Indeed, there is anecdotal evidence that 4* researchers are pulling everything back "to themselves" and in effect weakening the position of junior researchers who are equally critical to the success of a team. The assessment exercise should recognise the importance of team working and the development of junior staff as an equally important element of assessment criteria. The same could happen with multidisciplinary work; the strongest participants will tend to take more than their share to the detriment of less well established members.

ASSESSMENT OF COLLABORATIVE WORK

The initial decisions paper suggests that on the one hand the assessment process will be built around expert review conducted by discipline-based panels, whilst on the other calling for a process that better recognises research that crosses traditional discipline boundaries. Many of the emerging themes in engineering, including nanotechnology, bioinformatics, built environment, and bioengineering are multidisciplinary and

based upon building large coherent teams with diverse skills, often from a number of institutions including business. The discipline-based method of assessment runs contrary to the spirit of collaborative research and it is unclear how the RAE will be structured to cover this vital area.

RATING OF MERGED DEPARTMENTS

The IEE has received anecdotal evidence that the merger of departments with different research ratings automatically results in the new department being regraded to the lower rating. Clearly this causes dismay amongst those researchers previously in the higher rated department and can seriously jeopardise future funding. There should be a method of protecting high calibre research from this type of consequence.

NEXT STEPS

It is clear that there is still some scepticism about the changes for RAE 2008. In particular our members are concerned that there are still no firm processes for the assessment of either collaborative work between departments, institutions and business, or for applied research. It is noted that there are to be more consultations to “put flesh on the bones”; however, there is consultation fatigue amongst the academic community and more innovative ways of engaging the research sector should be explored. The IEE would be keen to explore new ways of bringing the communities together to ensure the RAE is as effective as possible.

March 2004

APPENDIX 15

Memorandum from the British Medical Association Medical Academic Staff Committee's

The BMA MASC considered the proposals for the RAE 2008 at its meeting on 23 April. Following this meeting we wrote to our members requesting feedback on the actions of universities across the UK to confirm whether the meeting's conclusions reflected widespread practices or were drawn from isolated examples.

Regrettably, it seems that many clinical academic staff across the country are being subjected to unfair pressures as institutions attempt to position themselves for the next round of assessment. Many institutions are re-configuring their staffing profiles in anticipation of scoring highly and redundancies are being considered, even before the full detail of the next assessment is published. Some institutions are applying unacceptable pressure on staff to become sufficiently returnable in the RAE (ie 5* plus), threatening disciplinary action if imposed performance targets are not met. These moves are incredibly de-motivating and will undoubtedly impact on recruitment and retention.

In one example, a medical school has contracted clinical academic staff to spend 90% of their contracted hours on non-research activity, leaving 4 hours of contracted time in the week to meet a number of research criteria as follows:

- must be research active and operating at RAE level 1
- must have an individual written research plan
- at least two high impact journal publications each year
- at least one peer reviewed grant current and £50k current grant income per year
- at least two substantive grant applications (>£50k) within any twelve month period.

These criteria are completely unrealistic in the context of the posts concerned. The sanctions against academics for not meeting these targets are not clear, but following the 2001 RAE, those with “meagre research grants and few publications had their contracts terminated”.

In another example of bad practice, the MASC heard of an instance where a high achieving academic with a research programme worth £300 000 went on maternity leave. Subsequently she has been told that she is borderline returnable and that she should resign her clinical fellowship. The MASC was already concerned about the negative impact of the RAE in encouraging women into academic medicine and it is becoming clear that the next round will be no great improvement. We will be responding to the forthcoming consultations on panel membership, arguing for fair representation of women on the medical panels.

At a further medical school, the last six months has been spent preparing for the next RAE, where the clear focus of their new HR strategy was to promote research at the expense of teaching capacity. Following intervention by the BMA, it seems that this strategy has been halted, but the approach is not untypical. The continuing focus of medical schools on building RAE-rewarded research activity increasingly seems in conflict with the objectives of the NHS (the joint employer of clinical academic staff along with the universities) which requires both high quality clinical research and increased numbers of medical graduates to underpin the government's drive for an expansion in the numbers of medical staff.

The present implementation of a new contract of employment for clinical academic staff which has really only just begun adds a further layer of complexity to the difficulties being experienced. Medical schools are presently in the process of agreeing job plans with their clinical academic consultant staff, which from this year are based on a new model of an overall 50% commitment to the university and a 50% commitment to the NHS. While there is flexibility in this designation to reflect the work that is required of individuals, the 50:50 split of time should be reflected across the medical school as a whole. Many medical schools are seemingly ignoring the need for joint management with the NHS. Reports we have received suggest that there is pressure being put on individuals to reduce their clinical commitments to support the medical schools' research policy. In some cases, individuals are having their contract capped at 40 hours (in terms of pay, if not expected workload), and the medical schools are refusing to allow clinical academics to take on additional NHS activities (ie up to 48 hours) when there is funding available in the NHS to support these activities and there is a clear need to maintain and develop capacity in the NHS.

Finally, the Committee was particularly concerned that the gauge of what was quality research would be determined by the Unit of Assessment panels, which meant that the requirements of the exercise wouldn't be totally clear until after submissions had been returned.

We have attempted to raise these issues with the HEFCE but have had no satisfactory response.

I hope that these comments are useful to your enquiry. Please do not hesitate to contact me if you require any further information.

May 2004

APPENDIX 16

Memorandum from the Association of the British Pharmaceutical Industry

The Association of the British Pharmaceutical Industry represents the majority of companies in Britain that research, develop, manufacture and supply prescription medicines. It also has other members drawn from organisations with an interest in the pharmaceutical industry operating in the UK.

The pharmaceutical industry funds a substantial amount of research in Higher Education in UK, hosting nearly 700 PhD students in laboratories and funding over 400 separate collaborative research projects. This equates to funding over £70 million on collaborative research (excluding contract and clinical research). The pharmaceutical industry therefore has an interest in the way that quality of research is assessed within the sector and we have already stated our views in response to consultations held last year on aspects of the proposal to revise the RAE.

We have concerns over the decisions which have been made by the UK funding bodies as a result of earlier consultations²⁹ and over the proposed panel configuration and recruitment.³⁰

KEY CONCERNS

- *Fundamentally there has been no change in the RAE, despite significant consultation*, indeed the exercise looks increasingly bureaucratic with many more Panels than last time. The ABPI would like to see a radical revision of the allocation of dual support money and replace the RAE with an alternative process that does not duplicate the significant and more robust Peer Review that already exists in the Research Councils. Comments below do not indicate an endorsement of the RAE proposed for 2008.

- *Proposed configuration of units of assessment and main panels*

It is disappointing that, despite substantial discussion, the proposed units of assessment are, if anything, less appropriate for medical and biological science than those employed in RAE 2001. The proposed units of assessment are clearly unsuited to the increasing amount of interdisciplinary research and also result in artificial boundaries. For instance preclinical research in the disease areas of cardiovascular medicine, cancer, infection and neuroscience would presumably be assessed by panel A, whereas all other preclinical research would come under panel D.

Despite recommendations from Gareth Roberts's review, that assessment panels should work more closely together in discipline based groups, and strong support during the consultation on his report,³¹ for the principle that the assessment process "should be designed better to recognise excellence in applied and practice based research, in new disciplines and in fields crossing traditional discipline boundaries"³² there is no mention of this type of working in the consultation document on panel configuration and recruitment.³³

²⁹ RAE 2008. Initial decisions by the UK funding bodies February 2004.

³⁰ RAE 2008 Panel configuration and recruitment March 2004 (RAE 02/2004).

³¹ Joint consultation on the review of research assessment, May 2003 (HEFCE 2003/22).

³² RAE 2008, Initial decisions by the UK funding bodies, February 2004 (RAE 01/2004).

³³ RAE 2008, Panel configuration and recruitment, March 2004 (RAE 02/2004).

— *Bureaucracy inherent in creating an increased number of panels*

By bringing groups of sub-panels together under a main panel an extra level has been created which requires additional input from chairs of sub-panels as well as a main panel chair and other main panel members. In addition the number of sub-panels has increased from that originally proposed. In our response to the Review of Research Assessment last year we commented that the time and effort to carry out the assessment must be reasonable, as we believe it will be difficult for most pharmaceutical companies to justify allocating staff time to a lengthy and bureaucratic assessment process.

DUPLICATION OF PEER REVIEW ALREADY CARRIED OUT BY RESEARCH COUNCILS

- All work funded by the Research Councils, charities and industry has already been reviewed by experts. This should be taken into account when carrying out the proposed Research Assessment Exercise. Income metrics, which are already captured by institutions and departments, are an important measure of the success of an institution and should be used wherever possible to lighten the load of panels.

Time commitment—difficult to encourage industry participation

It is proposed that sub panels should ‘include individuals with significant experience of research environments outside UK HE’. Whilst it is clearly of benefit to involve senior research personnel from industry, we are not convinced that the proposed expert review process differs substantially from previous Research Assessment Exercises and, as such, demands a high level of commitment. Hence we will find it hard to recommend to our members that they participate in the RAE.

July 2004

APPENDIX 17

Memorandum from Dr Ian Terrell, Ultralab

I wish to express my concern about the weakness of the proposals being made and about to be implemented, not least because despite the lessons of the last exercise, and the stated intentions for improvement, the proposals do not make it at all clear how improvement is to be implemented.

My main concerns are over:

1. How applied and practical research outcomes are devalued by the process in favour of a limited number of prestigious “academic” journals.
2. How much the process favours a few large institutions rather than creates a culture for innovation in research.
3. How knowledge is segmented quite it seems arbitrarily and against the interests of research in new technologies, communication and learning.
4. How few innovative new industries are being proposed as proposers of panel members.
5. How one type of research output, the formal academic and often positivism research paper is likely, once again to dominate over other models including those which engage public involvement in research.
6. How the system is not designed to develop and enhance a creative, challenging research culture but to secure resources with the existing research power bases.

The process is so fundamentally flawed that I believe it is a huge travesty requiring immediate action, in the interests of developing new communication and information technologies for building sustainable community development.

July 2004

APPENDIX 18

Letter to the Chairman of the Committee from Professor Richard Joyner

Many thanks for the opportunity to give evidence to your Committee earlier this week. I understand from Peter Cotgreave that you had expected rather more trenchant criticism of the RAE than I and the others provided. Let me therefore try to clarify what my position is.

I start from points that Bob May made most cogently to you in his evidence. Unless each academic in every institution is funded equally for research (which few would regard as wise or affordable) there will be a need for an allocation mechanism. No mechanism that can be devised will be immune from “games playing,” and academics tend to be good at intellectual games.

That said, what Gareth Roberts' review and the response to it showed was that (pace the AUT) most members of the academic community are comfortable with the RAE as the assessment mechanism. It has its faults, such as problems in treating interdisciplinary research, but no-one has come up with a better, generally acceptable alternative. Yet, after HEFCE's RAE settlement in 2001 there was a huge uproar, because the improvement that many institutions had made went unrewarded by the extra cash that they felt they deserved. I believe that this tells us that there is a huge problem associated with the RAE process, but that it is not one that has been generally recognised. The problem is the widely held, but unrealisable assumption by institutions and their staff that success or improvement in the RAE will guarantee financial reward. Once it is accepted that that cannot be the case—and no Government is going to write a blank cheque—it becomes easier to see a way forward.

Before we can achieve a rational assessment and allocation mechanism, I believe that we need to decide the answers to three questions, of increasing difficulty:

1. How much money will be provided out of general taxation to fund research in our universities?
2. How should that money be split between the two arms of *dual support*? [Dual support has its problems, but I believe that it is better than the proposed alternatives, for reasons that I won't go into here.]
3. What should the shape of our national research portfolio be? I recognise that this is the really difficult one, but under our present mechanisms this shape is being determined rather haphazardly, in ways that are much too strongly influenced by undergraduate demand.

Only once this tricky examination paper has been answered will it become possible to contemplate sensible allocation procedures. I would use the results to produce rough, but workable numbers on how many good quality researchers, for example mathematicians, physicists or botanists, the system can sustain on a permanent basis. My strong expectation is that the resulting numbers will actually be less than the total populations of the current 5 and 5* departments, which is where I would then put all of the money.

It will be argued that this would fossilise the system, which is clearly undesirable. However, I believe that the Research Council/OST part of the equation can be used to prevent that happening. Full-cost research grants and contracts will provide the means by which the better 5 and 5* departments can grow. And as now, excellent people in lower rated units will be able to apply for Research Council grants. I would allow them to bid on the basis of reclaiming their full costs plus a small premium, (ie they would get more money than a 5 or 5* unit would get for a similar proposal.) They would also have teaching funds, which should be increased for laboratory based subjects to more realistic levels. I would also expect my three questions to be revisited about every ten years (perhaps as part of revising a ten-year science strategy) and for this review to provide opportunities for new entrants to be identified and funded, if there was extra resource available.

No doubt the Treasury will require there to be a quality assurance system for those Departments getting RAE monies. Rather than being an *assessment process*, however, this could be a much lighter touch *audit*, which should be much less expensive. It could perhaps be combined with the *institutional audit* process that we now have for teaching quality—that way we might get teaching and research considered sensibly together.

I believe that this approach is radical, sustainable and addresses the fundamental problems of the present system, although of course it's not perfect. What do you think?

PS These are my own thoughts, not an official SBS view.

PPS I talked to Sean McWhinnie at the Royal Society of Chemistry regarding your exchange with Natalie about how many Chemistry departments there are. Your figure of ca 55 probably reflects the number of UK institutions that offered single honours chemistry courses a year ago. Based on expected closures and amalgamations, that figure is set to fall to less than 50. Natalie's figure of ca 35 is much closer to the number of English institutions that entered Chemistry in the 2001 RAE, which will probably fall to less than 30 if there is a 2008 RAE.

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APPENDIX 19

Supplementary evidence from Higher Education Funding Council for England

1. HAVE YOU CONTRIBUTED TO THE CHANCELLOR'S 10-YEAR SCIENCE STRATEGY? WOULD YOU WELCOME A MORE FUNDAMENTAL REVIEW OF GOVERNMENT RESEARCH FUNDING?

HEFCE has been closely involved in discussions with DfES, OST and HM Treasury as part of the 10 year review. We have made an input in a range of areas including the funding and management of research, knowledge transfer and skills.

We welcome the 10 year review which embodies the government's strong commitment to science. The government has placed very considerable sums of public money in the science base and is right to examine how these resources can best serve the public interest. We also believe very strongly that the government is right to try to give the science base a clear long-term vision for the future. The case for a further review revisiting the ground covered by the 10 year review is not, in our view a strong one.

In presenting the 10 year review, the government has wisely asked stakeholders not to revisit the ground covered in previous reviews. It presents a list of nine government reviews of science policy in the years 2002 and 2003 alone.³⁴ HEFCE applauds the government's decision to provide a 10 year vision for the science base and is committed to working within the framework to be published soon.

2. WHEN YOU HAVE ESTABLISHED A FUNDING MECHANISM, WILL YOU BE CONDUCTING AN IMPACT ASSESSMENT?

HEFCE produced a *Review of research funding* in 2003 with a view to beginning a debate about the way in which funding systems should evolve in the run-up to 2009–10 (when the results of RAE2008 will begin to inform funding).

The HEFCE funding model will have to be re-engineered to adapt to the shift from grades to quality profiles. We will take the opportunity to re-examine some of the evidence underpinning the current model (for example the mapping of subjects to cost bands). When this is done, we will, as a matter of course, explain the reasons for the decisions we have taken. We do not anticipate that there will be any new administrative requirements upon institutions (for example new data collection). If any such requirements are imposed we will, of course, undertake an impact assessment.

3. WILL YOU BE MAKING FURTHER RESOURCES AVAILABLE TO PANELS? IF SO HOW MUCH EXTRA FUNDING ARE YOU PROVIDING FOR THE EXERCISE? CAN YOU OUTLINE THE ROLE OF THE MODERATOR?

We agree with the view expressed in the committee's previous report that, if the RAE is to take place, it should be properly resourced. We are currently planning on increasing the budget slightly for the 2008 RAE (in total the administrative costs of the 2001 RAE was £5.6 million). We are planning spend of around £10 million which is still only around 0.1% of the funds to be distributed with reference to the next RAE. We hope to make substantial improvements in support for panels through a dedicated team of panel secretaries.

The underlying rationale for the recommendation for "moderators" came from the need to ensure consistency of process and decision making. The chairs of the RAE main panels will be individuals independent of the sub-panels with experience of academic management at school or faculty level who should therefore be able to weigh the claims of cognate disciplines. Furthermore, all of the sub-panels grouped together under each main panel will have the same secretary, part of whose role will be to ensure that each panel interprets the guidance provided by the RAE team in a consistent manner.

4. SUB-PANELS WILL CONTAIN MORE MEMBERS FROM THE USER COMMUNITY AND FROM OVERSEAS. HOW WILL THE NUMBERS AND INDIVIDUALS BE DETERMINED?

Our policy on the recruitment of subpanel members is set out in RAE 02/2004 *Panel configuration and recruitment*. We will be seeking nominations for panel members in July and we hope that this process will identify suitable candidates from user communities and from overseas. The numbers will not be pre-determined: we will attempt to secure user and overseas representation on all panels but this will depend to a great extent on the characteristics of the most suitable candidates.

³⁴ Science and Innovation: working towards a 10 year investment framework p 3. The list is not exhaustive. It excludes, for example HEFCE's Review of research funding. It also excludes a much larger number of influential reports emanating from outside government including those of the committee.

5. WHAT MEASURES WILL YOU BE TAKING TO ENSURE THAT PANELS OPERATE IN A CONSISTENT MANNER?

We have introduced higher level panels (“main panels”) with a brief to make profiles in cognate subjects as comparable as they can be (see answer to Q 3).

6. DO YOU THINK THE CONTRIBUTIONS MADE BY RESEARCHERS IN PROMOTING, COMMUNICATING AND EXPLOITING THE OUTCOMES OF THEIR RESEARCH SHOULD ALSO BE RECOGNISED AS AN ASSESSMENT FACTOR?

Promoting, communicating and exploiting the results of publicly funded research is vital for economic and social development. However, it does not necessarily follow that because something is desirable, the RAE should assess it. The RAE is about assessing the *quality* of research. There are reasons why we do not believe it would be appropriate to adopt the proposal implied in the question.

- There is a straightforward limit to what RAE panels can accomplish. Increasing the complexity of the task increases panel workload.
- There is a risk that a single process producing a single set of results to reflect standards in a diverse range of activities may end up producing ambiguous information.

For these reasons, we continue to believe that, for example, the engagement of researchers with business and the wider community is best recognised through the Higher Education Innovations Fund (HEIF). Similarly there is a range of other Government and Learned Society initiatives to improve the communication of research to the wider public.

7. WHAT RECOGNITION WILL RAE 2008 GIVE TO HIGH-QUALITY RESEARCH IN THE FIELD OF INTERNATIONAL DEVELOPMENT? HAVE DFID AND OTHER DEVELOPMENT AGENCIES BEEN INVOLVED IN IDENTIFYING APPROPRIATE METRICS FOR ASSESSING THIS TYPE OF RESEARCH?

We are actively considering establishing a unit of assessment for “development studies”. The role and development of metrics is a matter in the first instance for the panels (which have not yet been established). It is not immediately clear that development studies is a field in which metrics will play a particularly prominent role although we will take advice on this point from panelists and other stakeholders including DFID.

8. HOW CAN RESEARCHERS’ ACCESS TO LARGE FACILITIES BE USED IN THE ASSESSMENT PROCESS?

We have no objection in principle to panels considering information on access to large facilities. If they were to do so, it would probably be helpful if that access were costed by the provider of the facility, so that panels could more readily compare it with cash grants.

9. WHAT OPTIONS ARE YOU CONSIDERING FOR CALCULATING QR FUNDING FROM THE QUALITY PROFILE? WHEN WILL YOU ANNOUNCE THE MECHANISM?

The principle for allocation of QR funding is excellence. Accordingly we will consider options for our funding which ensure that the highest quality research is adequately supported. We will provide further details about the technical aspects of converting profiles into QR funding during 2005. However, given that we are operating a criterion referenced system (the preference from the majority who responded to the consultation; the Robert’s Review had recommended a norm-referenced approach) it would not be feasible to provide detailed funding ratios in advance of the 2008 RAE. It is simply impossible for the funding councils to make commitments regarding funding when virtually every dimension of the formula remains unknown—ie numbers of staff submitted; the spread of activity across the four points of the profile; the total QR funding which is dependent on the 2008 Spending Review.

10. HOW CAN PANELS AVOID ASSIGNING RATINGS TO DIFFERENT RESEARCHERS? HOW WILL CONFIDENTIALITY BE ASSURED?

Panels will be asked to produce a profile which reflects all of the information contained within a submission. The submission will contain a number of research outputs which can be linked to individuals, and other information which cannot be linked to individuals (metrics and strategy). It is certainly not necessary to give individuals a score in order to produce an overall assessment of this material.

Panel members, secretaries and RAE team staff will continue to be bound by a duty of confidentiality.

11. COULD THE PROFILE SYSTEM BE APPLIED RETROSPECTIVELY TO DATA FROM RAE 2001? HAVE YOU ATTEMPTED TO DO THIS TO TEST YOUR QUALITY PROFILE APPROACH? IF SO, WHAT IMPACT DID IT HAVE ON INSTITUTIONS’ INCOMES?

In theory the answer is yes. However, this would require the 2001 RAE panels to be reconvened and RAE 2001 workbooks to be revisited. These workbooks are no longer available as they were destroyed in line with the Data Protection Act.

What is more, previous attempts to project the outcome of future RAEs from past exercises have failed (even where the grading system has not changed between RAEs). HEFCE is acutely aware of the need to avoid giving misleading information based upon unreliable estimates.

Therefore, whilst we are aware of attempts to establish a likely effect of the profile system upon funding, we do not believe they provide any information which can usefully inform our forward planning or that of institutions and would not advise anyone to place any great reliance upon them.

12. HAVE YOU CONSIDERED THE IMPACT OF THE NEW RAE ON CAREERS OF YOUNG ACADEMICS, CAREER BREAK PEOPLE AND THOSE ENGAGED LARGELY IN TEACHING?

We have introduced specific mechanisms to prevent any disadvantage to researchers who have taken a career break. Since 2001, panels have been obliged to take career breaks into account in making their assessment. Researchers who cannot submit a normal weight of outputs are still eligible to be submitted if this is the result of a career break.

We will also provide formal training for panel members and secretaries which will explicitly address equal opportunities issues and ensure that none of the groups mentioned will be unfairly disadvantaged by the assessment process.

For RAE2008, we have made it a condition of entering the exercise that HEIs produce a code of practice on the selection of staff for assessment which embodies principles of equality of opportunity and to ensure that their staff are aware of that code.

The funding bodies commissioned an Equality audit of the Roberts RAE proposals. It is available on the Roberts Review website (www.ra-review.ac.uk).

13. WHAT PLANS DO YOU HAVE TO INTRODUCE FINANCIAL INCENTIVES FOR EXCELLENCE IN OTHER AREAS OF UNIVERSITIES' ACTIVITIES? COULD THESE HELP TO MITIGATE THE EFFECTS OF SELECTIVE RESEARCH FUNDING?

We recognise that research activities carry enormous prestige within Higher Education and that other activities are sometimes undervalued as a result (especially as student and employer choices seem to place greater weight upon institutional brand than changes in pedagogic practice). This is a global phenomenon even in countries without a robust research assessment system such as the RAE. HEFCE has actively promoted the notion of institutions focusing on their strengths. To this end we have provided financial incentives in a number of other areas including:

- Increased funding for widening participation from £38 million in 2002–03 to £263 million in 2004–05.
- The Higher Education Innovation Fund (HEIF) supports work with business, public sector and the wider community. The first round (2002–04) was worth £77 million. The second round (2004–06) will be worth £176 million.
- Committed £315 million over five years for Centres of Excellence in Teaching and Learning (CETLs).

14. IN GIVING EVIDENCE TO THE COMMITTEE, SIR HOWARD NEWBY COMMENTED ON HEFCE'S LACK OF PLANNING POWERS. COULD YOU PROVIDE A MEMORANDUM OUTLINING:

- (a) How your powers are currently limited;
- (b) How options are available to you to address regional imbalances;
- (c) What changes in legislation could be considered; and
- (d) How you might exploit new powers.

Unlike the LSC, HEFCE does not presently have planning powers and cannot control the “make-up” of subject departments in HEIs, and hence in the different regions or in the sector as a whole. There is no power to direct collaboration, rationalisation or the preservation of specific departments where there is a perceived national or regional interest.

The Case for intervention

The general case for intervention is that economic and social development may be held back where subjects of strategic importance, such as science, mathematics or foreign languages, are not encouraged. Assessment of the UK's current skills needs show shortages, for example in intermediate technical skills.³⁵ Projections of long-term occupational needs of the economy show increasing demand for certain types of skills associated with associate technical, managerial and professional occupations.

There is also a case for promoting responsiveness to the wider needs of the economy—the externalities associated with exercising science skills and contributing to the science base and other highly productive industries may not be taken into account in individual choice when acquiring those skills.

³⁵ Employer Skills Survey 2003.

³⁶ Sector Skills Development Agency, Working Futures: National Report 2003–04.

Falls in student demand may also have unintended consequences, particularly where institutions are using facilities to support both teaching and research—there may be a risk to strong research departments if a drop-off in teaching undermines their viability, and where there are inter-linkages between disciplines, eg mathematics/physical sciences are often seen as core disciplines necessary to support research in many other sciences over the long run.

Forms of intervention could be on the student demand-side and/or encouraging supply.

Demand

The current higher education funding formula means student demand is the driving force for changes in student numbers in subject areas. Data shows that the ratio of applications to places for declining subjects such as science is lower than for popular courses, so it does not seem to be the supply of places that is driving down demand. A level provision in science and mathematics has fallen even more dramatically than HE qualifications. Clearly a demand side strategy to retaining student numbers in strategically important courses is key. And any such strategy must start in schools. The Roberts review identified falling demand for STEM subjects, for example, as a response to a perception of more difficult/less relevant courses, lack of ability of teachers and the schools curriculum to interest and inspire them and less well defined/attractive career options. Implementation of the Roberts review recommendations is aimed at tackling these demand side problems in STEM and the upcoming 10-year framework for investment in science and innovation will review and add to these measures.

Supply

Alongside intervention on the demand side there are also justifications for intervention to retain some subject provision:

Without intervention subject capacity could be lost possibly for ever. This may be a concern where subjects are in sharp but temporary decline; or where other policy to encourage student demand would take effect with a long lag (eg from school level) and should therefore be supported through the maintenance of capacity further up the education system; or for national heritage subjects.

Without intervention the costs of volatility can be considerable eg the capital costs of laboratories that have to be written off at closure can be substantial and there will be substantial waste if a few years later new demand emerges.

Without intervention, regional disparities between the set of subjects offered may occur, creating access issues for potential students groups not prepared to travel.

With the introduction of variable fees there is uncertainty about how student demand may react—areas of declining demand may see that trend accelerate; or trends may reverse if there is better information about wage premia associated with different degrees. In considering the impact of variable fees, HEFCE is reviewing the Teaching funding method.

Types of supply side intervention

There are two issues to consider in turn: (i) the spectrum of interventions possible within the set-up of the existing HE system and within HEFCE's funding remit; and (ii) possible longer-term changes to the system of funding and relationship with HEIs.

Spectrum of possible existing interventions

Within *existing responsibilities and remits*, there are a number of interventions that HEFCE could make, in partnership with institutions (HEIs, RDAs, HEFCE, Research Councils etc).

Generating demand through tackling information failures. Actions to tackle information failures through better marketing of the returns to types of subjects; employability/first destination data published for example in university prospectuses; and university departments engaging with schools and employers about the benefits of different disciplines or activity to raise aspirations and support improved understanding through Student Outreach work.

Institutional collaboration to identify and maintain sufficient levels of subject provision. Discussion between HEFCE, HEIs and RDAs to ensure subject provision meets changing demands of students and employers (eg the provision of new specific types of engineering courses) and provision is sufficient within regions, eg encouraging collaboration/pooling between HEIs to identify the size and number of departments needed in a particular region. This would be resource intensive for HEFCE, HEIs and RDAs etc to be more active; we would need to ensure linkages to LLSC's and FE, such an approach would be open to unconstructive lobbying; and there would need to be a national overview to ensure regional strategy adds up to aggregate strategy.

Directing new provision. Currently, recurrent (baseline) funding is allocated by the teaching formula funding and *additional* funding for growth in overall HE places is allocated between HEIs by a bidding process and funded at the same rate as the recurrent provision. The additional growth funding at present is directed to Foundation Degrees (£9 million over 2003–04—05–06). We could be more directive in how new money will be allocated; HEIs bid on the basis of those specific criteria, eg for certain subjects. The risk is that these places may not be filled by student demand.

Financial inducements to grow certain subjects. HEFCE could provide financial incentive to increase provision for certain subjects by adopting an “add-on” weighting that entails funding growth in certain subject areas at a higher rate for the first year³⁷ than the existing subject weights allow, in order to give targeted incentives at the margin, take into account the cost of marketing, capital, student outreach etc. Again the places may not be filled by student demand if HEIs do not spend the extra money effectively on targeting increased participation through marketing and outreach to schools.

For these options, where institutions take an active role in identifying and directing supply to certain areas, there may also need for further supportive action by government (and/or RDAs) to encourage student demand. This is at present largely directed through the set of Roberts’ recommendations for example to enthuse and inspire pupils in these subjects at schools to encourage them to continue study in further and higher education. But, Government could also target more directly HE take up, for example through bursaries, fee remission and debt write-off. Such student demand inducements cannot be given via HEFCE funding streams, since this would step beyond its remit.

Long-term changes to the HEFCE-HEI relationship

In addition to the options outlined earlier there may be a case for formalising arrangements that encourage greater coordination by expanding the remit/role of HEFCE in considering and meeting the “needs of the economy”. This would require changing HEFCE’s remit, in order for it to actively manage institutional collaboration and specify provision in order to ensure that there was adequate and satisfactory provision to meet the needs of an area. This would require secondary legislation.³⁸ It would mean HEFCE taking a central role in demanding collaboration with RDAs and HEIs, eg RDAs/HEI could “bid” to HEFCE setting out the case. HEFCE would then have the final say on funding to meet nation/regional skills needs and direct total (new and recurrent) provision in certain subjects and/or certain regions. This would put a lot of faith in HEFCE/RDA capacity to define skill needs; it would need national overview to ensure regional strategy adds up to aggregate strategy; it would be open to intense lobbying. But HEFCE could determine national overview in conjunction with Sector Skills Councils

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³⁷ After the first year, last year’s growth is funded at the recurrent rate.

³⁸ Section 69(5) allows that “The Secretary of State may by order confer or impose on a council such supplementary functions relating to *the provision of education* as he thinks fit.” Ie the SoS can add certain types of powers and functions as long as the 1992 Act does not specifically say that it cannot. In addition, under section 81(2), “The Secretary of State may give general directions to a council about the exercise of their functions.”