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'Impact' in the proposals for the UK's Research Excellence Framework: shifting the boundaries of academic autonomy

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Abstract

Evaluation of university-based research already has a reasonably long tradition in the UK, but proposals to revise the framework for national evaluation aroused controversy in the academic community because they envisage assessing more explicitly than before the economic, social and cultural ‘impact’ of research as well as its scientific quality. Using data from the 2009 public consultation on the proposals for a Research Excellence Framework, this paper identifies three main lines of controversy: the threats to academic autonomy implied in the definition of expert review and the delimitation of reviewers, the scope for boundary-work in the construction of impact narratives and case studies, and the framing of knowledge translation by the stipulation that impact ‘builds on’ research. Given the behaviour-shaping effects of research evaluation, the paper demonstrates how the proposed changes could help embed impact considerations among the routine reflexive tools of university researchers and enhance rather than restrict academic autonomy at the level of research units. It also argues that the REF could constitute an important dialogical space for negotiating science-society relations in an era of increasing heteronomy between academia, state and industry. But the paper raises doubts about whether the proposed operationalisation of impact is adequate to evaluate the ways that research and knowledge translation are actually carried out.

Keywords

research evaluation, research assessment, impact, knowledge translation, academic autonomy, boundary-work

1. Introduction

The United Kingdom's Funding Councils for research have developed a new framework for research evaluation which will replace the Research Assessment Exercises (RAE), conducted six times across UK higher education institutions (HEIs) between 1986 and 2008. The primary aim of the exercises – “to provide authoritative and comprehensible quality ratings for research in all disciplines ... to inform the UK higher education funding bodies’ allocation of grant¹ for research” (HEFCE, 2009a, paragraph 6) – remains in place, but an additional strategic aim is incorporated into the proposals for the new Research Excellence Framework (REF): “to develop and sustain a dynamic and internationally competitive research sector in [each] country or territory [of the UK] that makes a major contribution to economic prosperity, national wellbeing and the expansion and dissemination of knowledge.” (HEFCE, 2009a, paragraph 14) The central implication of this is that it will be necessary to assess more explicitly than before the economic, social and cultural ‘impact’ of research. This development, and the approach the Funding Councils have proposed for assessing impact, were the subject of considerable debate in British academic circles during late 2009 and 2010.

1.1 Structure and argument of the paper

Firstly, the genesis of the REF proposals is described, highlighting how their most novel and controversial aspect – the suggestion for a separate element or domain focusing on the impact of research – was conceived. The next three sections draw in turn on three theoretical approaches from the social studies of science to assemble a framework for analysing the academic field and its relations to the social world, on the assumption that current debates about impact cannot be divorced from how researchers are implicated in a variety of positional struggles that involve the construction of identities and boundaries in interaction with other actors both within and outwith ‘science’. Each theoretical approach is used to interrogate a dominant theme within the REF proposals for an impact domain, namely expert review, the construction of impact narratives and case studies, and the stipulation that impact ‘builds on’ research. The analysis explores the ways in which members of the academic community, as respondents to a public consultation on the proposals, endorse or contest the proposed operationalisation of impact. The discussion considers the claim that impact assessment threatens academic autonomy by introducing yardsticks other than scientific quality and assessors other than fellow scientists, and the counter-argument that the rising currency of research-based knowledge in non-academic fields means that *not* evaluating the uses of research undermines academic autonomy. It is argued that impact assessment, in broadening the researcher’s repertoire of possible roles and audiences, could enhance rather than constrain autonomy for individual researchers and research units, at the expense, however, of greater heteronomy of the academic field or disciplinary sub-fields.

¹ ‘Grant’ means the ‘block grant’ or ‘quality-related’ allocations for supporting research capacity and capability which are supposed to sustain strategic, long-term and speculative research and thus complement more targeted Research Council-funded research under the UK’s dual support system (DfES, 2006).

2. The REF

2.1 Development of the REF

The government's plans to replace the RAE were first announced in March 2006, the original intention being to introduce a system based largely, if not entirely, on metrics, partly to reduce the cost and burden of the exercise. A consultation was held during 2006 by the Department for Education and Skills (DfES) on the overall direction of reform, after which the Funding Councils for England, Scotland, Wales and Northern Ireland jointly set out their initial plans for the new system in March 2007. This was followed by the first consultation on the newly-christened Research Excellence Framework (November 2007 – February 2008) coordinated by the Higher Education Funding Council for England (HEFCE). Acknowledging opposition from most disciplines to a metrics-based assessment system, the framework was substantially revised to restore the central role of peer review, as well as to respond to concerns that bibliometrics and citation data would be incapable of capturing user value and impact² (HEFCE, 2008). This development mirrors Australian experience (Donovan, 2008) and finds support from contributors to a special issue of *Science and Public Policy* about metrics versus peer review (Donovan, 2007, p.541) . A second consultation was held between September and December 2009 (see table 1).

Table 1: Timeline (source: <http://www.hefce.ac.uk/research/ref/about/background/>)

June - December 2006	<ul style="list-style-type: none">• DfES consultation on proposals for reformed RAE• Revision, but dominant element remains use of citation data, in spite of concerns that this would disadvantage applied research
March 2007	<ul style="list-style-type: none">• HEFCE sets out initial plans for the development of the new REF based on DfES proposals
November 2007 – February 2008	<ul style="list-style-type: none">• First HEFCE consultation on REF proposals• Subsequent revision, reducing reliance on citation data, re-establishing peer review and introducing separately-assessed output, impact and research environment elements or domains
September –	<ul style="list-style-type: none">• Second HEFCE consultation on REF proposals• Impact pilot exercise launched to test feasibility and acceptability of

² Indeed the previous consultation had acknowledged concerns that the proposed reliance on quantitative indicators "would not adequately recognise particular features of certain types of research activity such as applied research and work of immediate and direct relevance to the needs of research users" (HEFCE, 2007, paragraph 56). At this stage HEFCE was inviting proposals for better quantitative indicators of user value than bibliometrics, research income and research student data (ibid., paragraphs 52 and 57). HEFCE's initial proposals incorporated an instrument that "enables empirical analysis of knowledge diffusion and knowledge use" (van Raan et al, 2007, p.5). In fact it is difficult to see how this instrument could be used to evaluate anything other than academic use, even if the authors of HEFCE's scoping study are correct that analysis of the field distribution of citations might be used to predict 'markets' for applied research (ibid.).

December 2009	assessing impact retrospectively: 5 units of assessment, 29 HEIs
March 2010	<ul style="list-style-type: none"> • Publication of consultation responses and announcement of initial decisions
July 2010	<ul style="list-style-type: none"> • Incoming UK government delays implementation of REF by one year to 2014, in part to permit more detailed discussion about impact following expression of concerns by academic community
November 2010	<ul style="list-style-type: none"> • Impact pilot exercise supported feasibility of impact assessment but recommended modifications to proposed assessment procedures
March 2011	<ul style="list-style-type: none"> • Decision on assessing research impact, reducing weight of impact element from 25% to 20% for first exercise
Summer 2011	<ul style="list-style-type: none"> • Consultation on panel criteria and working methods

According to DfES there was broad continuity between the approaches to research assessment used throughout the period 1986-2008. The first consultation document suggested, however, that fundamental change was overdue, owing to “the massive expansion of the sector, the effects of devolution and [the recommendations of] several formal reviews, most recently in 2003 by Professor Sir Gareth Roberts” (DfES, 2006, paragraph 2.6). Following the decision after the first HEFCE consultation to reduce the reliance on bibliometrics and reinstate the primacy of peer review, the most significant and controversial change is the introduction of an impact domain, perceived by some sections of the academic community as marking the advent (or intensification) of political steering of academic research and a more overt attempt than previously to shape the behaviour of researchers about topics and approaches. Among the most outspoken respondents to the second REF consultation was one who expressed the belief that the introduction of impact was “manifestly a product of HE being now under the Department of Business, Innovation and Skills” (BOCSS³) and another who ascribed it to a letter from Lord Mandelson to HEFCE in January 2009 (cited in paragraph 6 of the proposals), claiming that “impact assessment did not feature until the Secretary of State's funding letter” (UCU).

In fact, impact considerations have been implicit in UK research assessment for some considerable time. As early as the 1993 White Paper *Realising Our Potential* (OST, 1993) government science policy specified an impact imperative for UK scientific research (Henkel, 2000). HEFCE stated in guidance for the 1996 RAE that submissions should cover the alignment between institutional strategies and government 'Foresight' priorities and that the allocation of funds within institutions should take account of Foresight policy⁴ (ibid.,

³ Undated references refer to responses to the second HEFCE consultation on the REF. These were obtained from HEFCE under the Freedom of Information Act. Appendix A gives the full names of the organisations and groups cited.

⁴ “Foresight was designed to promote more productive relationships between academics and industry” and in particular “to promote partnerships that might support medium and long term exploitation of research with a view to securing a lead in [specified] key

p.73), but it appears that this advice carried relatively little persuasive power because it was not perceived as a priority in the RAE.

The contemporary political drivers can be dated from about 2006, when the Prime Minister's advisory body, the Council for Science and Technology, recommended that “a future system for quality-related funding must ... acknowledge the diverse roles that universities play in the economy and society, rewarding a greater range of activity” than the RAE (CST, 2006); the Treasury declared in the 2006 pre-budget report that “In order to maximise the economic impact of research, the new system [of research assessment] will provide greater rewards for user-focused research” (CBI); and the update on the Science and Innovation Investment Framework criticised the RAE for its lack of follow-through on the intention “to reward excellent user-focused research in the same way that it rewards excellent curiosity-driven research” (HM Treasury, 2006, paragraph 4.7). As noted above, the reforms proposed to the RAE by DfES in 2006 already included some ‘user impact’ metrics (DfES, 2006).

Political drivers are explicitly acknowledged in the REF proposals, which note that giving greater weight to research with demonstrable economic or social impact reflects “policy aims in all parts of the UK to maintain and improve the achievements of the HE sector both in undertaking ground-breaking research of the highest quality and building on this research to achieve demonstrable benefits to the wider economy and society.” (HEFCE, 2009a, paragraph 51) Some respondents to the second REF consultation – notably independent research funders – worried that this implied aligning research with political priorities (Cancer Research UK, BHF). Their concern was that it would disadvantage researchers whom they fund should the specific social, economic and cultural benefits that charities, for example, seek to promote fail to coincide with national priorities. Taken at face value, however, the REF proposals maintain a flexible understanding of relevance, i.e. one that is responsive to user needs, not driven by government priorities. Thus the definition of impact used for HEFCE's impact pilot exercise emphasised the breadth of possible uses of research: “any identifiable benefit or positive influence on the economy, society, public policy or services, culture, the environment or quality of life.” (HEFCE 2009c, p.3). When the term ‘impact’ is used in the remainder of this paper, the reader should refer to this definition, although we are chiefly interested in the reinterpretations of members of the academic community.

2.2 *‘Coming clean’: from implicit to explicit steering*

An important difference between the RAEs and the proposed REF is rhetorical. There is considerable evidence to show that the behaviour of researchers, research institutes, universities and governments is shaped in far-reaching ways by aspects of the institutional environment related to research assessment, such as global rankings of higher education research (Hazelkorn, 2009). In the RAE, this behaviour-shaping role was only implicit: HEFCE insisted that it was a simple ranking exercise, measuring research activity as it exists without attempting to exercise any steer (Lucas, 2006, p.39). Researchers in the social studies of

market areas and improving quality of life.” (Henkel, 2000, pp.76-7)

science, however, had demonstrated that the exercise influenced “decisions [by researchers] about what research to pursue and within what methodological paradigms” (McNay, 2007), and that it affected the cultural construction of researcher identity (Brew and Boud, 2009). Their analyses show the value of strategic knowledge of the evaluation process itself, and how this is likely to have been used by panel members within their own institutions in ways that benefit the latter (Butler and McAllister, 2009), but constrain the behaviour of individual researchers. For example, the designation of staff as ‘research-active’ or (by implication) ‘research-inactive’ became one of the key stakes of the RAE, with consequences for academic self-esteem and for career strategies (Lucas, 2006). This is indicated by the volume of comments made in the consultation about selection and eligibility rules and the legitimacy of ‘tactical selections’. The issue is controversial owing to the persistent under-representation of certain categories of staff submitted to RAEs (HEFCE, 2009b).

In this respect, the REF proposals marked a rhetorical watershed. Heeding Roberts' advice to bear in mind that “all evaluation mechanisms distort the processes they purport to evaluate” (2003), there is now an *explicit* statement that the goal of the exercise is not only to evaluate research activity but to create incentives that will “encourage desirable behaviours” on the part of researchers, research units and HEIs (HEFCE, 2009a, paragraph 27f). By extension it can be viewed as an attempt to counteract *undesirable* behavioural incentives inscribed in the field of academic research, notably the effects of international rankings, on which academic status is increasingly dependent (Pontille, 2002), but which are poor at capturing the wider social impacts of research and instead “reward classical conceptions of knowledge conducted by elites” (Hazelkorn, 2009, p.9). As Donovan notes, “apparently 'objective' bibliometric data are the sum of 'subjective' judgements and thus socially constructed” in line with some interests rather than others (2009, p.80). The perceived insensitivity of existing international rankings to the needs of the full range of users of research was cited as justification for an initiative by the European Commission's Research Directorate-General, which tasked an expert group with the preparation of a multidimensional approach to the assessment of university-based research (Potočnik, 2009; EC, 2010). The final format of the REF can be seen as an attempt to counteract the same bias, although it bears repeating that this was a *volte-face*, since the initial REF proposals had been based largely on bibliometrics. In spite of the advice from the Leiden University scoping study that it had commissioned, which claimed that a suitable bibliometric instrument could be constructed to assess impact (van Raan et al, 2007), HEFCE eventually paid greater heed to the negative reaction of the academic community, as expressed in the first consultation and in a 2008 bibliometrics pilot exercise. This suggests that the credibility of the exercise was paramount, and that the debate had shifted towards disputing the types of behaviour that are desirable rather than disputing the legitimacy of attempting to shape behaviour through a research assessment exercise.

2.3 How is impact operationalised?

Any assessment of the likely effects of the REF on the academic field at this stage are necessarily speculative. Although we now know when and in what format the REF will be implemented, we do not yet

know how this ‘innovation’ will be appropriated and used. Donovan described the Australian Research Quality Framework as an (aborted) experiment, since it would have operationalised a “pluralistic impact evaluation” framework (2008, p.58) that was significantly open to interpretation: its “quadruple bottom line” which defined impact in terms of social, economic, environmental and cultural benefits, was “unique in international impact assessment terms” (2008, p.53), and within these domains was an additional tension between assessing narrow utility or wider public benefit (ibid., p.54). As the REF definition cited above is even broader, its effectiveness for evaluation purposes will depend on how it is interpreted in practice. In this regard, the reactions of the academic community as expressed in the public consultation on the proposals provide valuable evidence both about what is perceived to be at stake by interest groups in academic research and about how academics are beginning to give the concept practical meanings.

The following three sections draw on material from the responses to the second HEFCE consultation to identify three major themes that are controversial in two senses: they aroused a lot of critical comment from sections of the academic community; and they appear as problematic when interrogated using three theoretical perspectives on academic research taken from the social studies of science literature. In addition to HEFCE’s own summary of responses, 50 responses were read (out of a total of 534 received by the Funding Councils) including all of those from HEI ‘mission groups’ and a random sample of the rest, structured to ensure proportionate representation from each of the following categories⁵: academies and subject associations, research users (business, charities and professional bodies), HEIs and departments or groups at HEIs. In the last two categories the sample was additionally structured to ensure a roughly even representation across all academic disciplines.

3. Controversies in the REF proposals on impact

3.1 ‘Expert review’ and the threat to field autonomy

Responses to the second consultation on the REF – as well as exchanges in the media, the specialist press and online forums and blogs – clearly indicate that the weighting, definition and measurement of impact were controversial for sections of the academic community. Above all, the introduction of this ‘new’ element was perceived by many as a threat to researchers’ autonomy and to fundamental academic freedoms. Autonomy is intrinsic to any field of professional activity. In Bourdieu’s analyses of what he calls the ‘scientific field’⁶, he comes close to defining the field by its degree of autonomy as “a microcosm equipped with its own laws” (Bourdieu, 1997, p.14). He also argues that any field of knowledge production is more autonomous the more that the audience is limited to direct competitors or peers, and that science is more autonomous than most fields in this respect (Bourdieu, 1975, p.92).

It is helpful to view professions as ‘projects’ that unfold over time (Bolton and Muzio, 2008), and whose

⁵ The categorisation is HEFCE’s.

⁶ This term does not imply any disciplinary restriction: in the following discussion, science should be taken to include the social sciences and humanities as well as the ‘hard’ sciences.

central aim is the quest for autonomy. The great achievement of the scientific field during the 19th century was to have established its own *incompatibility* with politics and other non-scientific modes of cultural production (Bourdieu, 1984, p.57). Establishing a distinctive and irreducible role for the knowledge or competences associated with a profession is part of the process of defining and legitimising its jurisdiction in society, and hence its autonomy. An autonomous professional identity is therefore reproduced “in part by a nexus of myths, socialisation processes and regulatory practices” internal to the field, but also by establishing “the status of academics in the nation state (as definers, producers, transmitters and arbiters of advanced knowledge) and ... the power of academic elites to secure widespread acceptance that the fulfilment of these roles required a strongly bounded academic arena.” (Henkel, 2005, pp.158-9) Paradoxically, therefore, autonomy is achieved, maintained and renewed partly through interaction *between* fields, which occurs both through metadiscourses at the macro-level and through ‘heretical’ appeals for external consecration at the micro-level. Bourdieu thus understands the autonomy of science not in terms of a straightforward dichotomy between dependence and independence, but in terms of a dynamic “dependence in independence (or vice versa)” (Bourdieu, 1997, p.48): a field of knowledge production, as well as individual knowledge producers, are permanently engaged in a negotiation of the terms of their autonomy from external constraints (i.e. political or economic power).

This dual basis for professional autonomy opens the way for individual actors to obtain consecration as professionals from audiences other than their direct peers, and these opportunities have arguably broadened in line with an increasing ‘social demand’ for scientific knowledge. This has given academic researchers a variety of options “to find an ‘elsewhere’ (real or imaginary) in which they can strengthen their notoriety and cultivate an appropriate self-image” (Fave-Bonnet, 2002). Examples include opportunities to engage in the media as a public intellectual (Bourdieu, 1984, p.285), to co-produce knowledge with users (Felt and Stöckelová, 2009, p.109), to write for, move to or set up think tanks (Osborne, 2004), to engage in non-academic social networks where their knowledge may be valued (Clegg, 2008), to attract industry funding or to assume advisory roles to policymakers. A proliferation of new audiences at either end of the ‘credibility cycle’ (Latour and Woolgar, 1979) reduces, by definition, field autonomy, but it may increase the professional autonomy of particular actors in the field by increasing the range of ‘elsewheres’ in which researchers or research units can claim credibility. In particular, recourse to external sources of consecration empowers ‘heretics’ to challenge the orthodoxies in a field (Pinto, 1994). It does, however, alter the basis of both credibility and autonomy, from a situation in which demonstrable peer recognition gave scientists the power to speak with authority to both scientific and non-scientific audiences, to one in which the sources of power are more diffuse, favouring those scientists with “the aptitude to coordinate different logics” of knowledge production and communication, for instance through interdisciplinary discourses, which can be interpreted as a search for a new language to accommodate the growing social demand for scientific knowledge without sacrificing the mechanisms of ‘quality control’ that had evolved through the development of specialised disciplines (Goulet and Ponet, 2009, p.17).

Schematically, the autonomy of researchers could thus be expressed as a condition for effective professional

activity that is in turn dependent on the fulfilment of three inter-related preconditions: control over the production of knowledge, control over the uses of knowledge, and convincing ways of representing knowledge to 'society'. The REF proposals can be assessed for their possible impact on each of these.

The first condition implicates the cycle of knowledge production and the pace of work (Bourdieu, 1998). It has been argued that it is precisely a slower pace – with time for reflection and immersion – that gives academic research its distinctive value among other 'modes of knowing' (Pels, 2003). A study in five European countries found that "researchers feel the need to carve out niches where they may perform 'slow research', meaning integration and articulation work of the knowledge produced in different sites and at different moments" (Felt, 2009, p.29). This form of autonomy therefore hinges on whether researchers have the necessary power to set aside sufficient time (their own and others') for 'non-productive' aspects of research like familiarisation with context, changing problem definitions mid-way through research projects, re-negotiation of roles, review and reflection. It is clearly related to the freedom to take risks – to spend time doing things that may not 'work out' in terms of meeting the dominant criteria of research productivity such as producing regular publications and securing a steady flow of research grants (Felt and Stöckelová, 2009, pp.82-4). Paradoxically it tends to accrue to those who have already demonstrated high productivity, for which they have been rewarded by fellowships or awards that effectively buy them time out (temporarily) from the pressurised world of 'normal' research production. This is because it is achieved either through the hierarchical delegation of responsibility (especially in the context of lab-based research) or by securing a measure of financial self-sufficiency, i.e. developing the capacity to attract funding (Garforth and Kerr, 2009, p.15). A second paradox is that this kind of autonomy is arguably threatened more by the 'marketisation' of the academic field – including the ways in which the RAE has been useful for "internal management purposes within institutions" (DfES, 2006, paragraph 6.1) – than by any direct external constraints. The REF sends contradictory signals about this form of autonomy. On the one hand it does nothing to challenge the restrictive performance management regime in which academics increasingly operate, and which mitigates against 'slow' research and risk-taking. On the other hand, ascribing value to 'non-traditional outputs' of academic work – ranging from policy reports to museum catalogues to fluid and context-sensitive knowledge forms such as "the embodied skills and enhanced confidence of others" (Garforth and Kerr, 2009, p.31) – means it could give researchers, individually and collectively, a more diverse repertoire for justifying their work, which potentially enhances their autonomy with regard to some of the constraints that operate at an institutional level. Some researchers and research units may perceive that there is greater scope to take risks in the kinds of knowledge production they are prepared to contemplate.

The second condition for autonomy is control over the uses of research. The mere fact that scientific knowledge and discourses are appropriated by actors outside the academic field for innumerable purposes implicates researchers in a heteronomous relationship with other fields of social action. Yet the expanding economic and political value of scientific knowledge in the information society has been accompanied by a remarkable indifference among scientists to reflect on the complex interactions between knowledge, culture, economy and communication (Wolton, 2005, pp.76-7). As noted by one respondent to the REF consultation,

it is a significant lacuna that impact assessment “is a dimension of our approaches to undertaking and disseminating research which has been largely lacking heretofore, with the consequence that understandings of research’s impact have therefore been supplied ... in less rigorous and unsystematic, and even sometimes in arbitrary or capricious, ways” (Conference of Professors of Accounting and Finance). It can thus be argued that autonomy is currently threatened by a *lack* of scientific control over the rising economic and political value accorded to research. If so, the REF impact domain could be a means of restoring this control.

A third condition for researcher autonomy is the availability of convincing ways of representing research to other audiences – given the need to justify research *both* to peers (for intellectual credibility) *and* to other actors such as potential users, funders and policy-makers (who guarantee the wider institutional conditions for professional autonomy). As Gieryn (1983, 1999) has shown, credible external representations create a buffer that shields autonomy at an organisational or institutional level. This condition is threatened because of broad social trends that have undermined professional jurisdictions, with more critical (if not hostile) public attitudes towards expertise of all kinds and a democratisation of the possibilities for knowledge production and access to knowledge. As a consequence, it is increasingly contingent upon any professional community to demonstrate outward public accountability in order to justify its right to self-regulation with respect to the production of a specific type of knowledge. The REF invites (or coerces) the academic field to engage in the kind of boundary-work which Gieryn called an ‘impurifying’ strategy (see following sub-section) designed to ‘buy’ the freedom for autonomous knowledge production.

The issue of academic autonomy is a shadow in the background of all discussions about impact assessment in the REF proposals, but it comes to the fore in debates about the composition of the sub-panels that would assess impact. If the REF is implemented as proposed by HEFCE, there will be an expansion of the ‘college’ of reviewers attached to each sub-panel to include more end-users of research. The aim is “to involve a majority of research users (broadly defined) in the assessment of impact” (HEFCE, 2009a, paragraph 71). The proposals do not use the normal term ‘peer review’, substituting the term ‘expert review’. The change, although never explained, seems to anticipate concerns about the threat this change represents to the principle of peer review and, by extension, to the integrity of a professional field.

The summary of responses to the second REF consultation notes that “many respondents recognised the importance of involving research ‘users’ in the assessment” (HEFCE, 2010a, paragraph 52). Indeed there were numerous suggestions to expand the categories of user proposed by HEFCE to include service users (Council of Deans of Health), patients (Cancer Research UK), mass media representatives (British Academy), experts on human resource management in research environments (Concordat Strategy Group) or knowledge transfer professionals (AURIL, Guild HE). More controversial were the scope and parameters of the involvement of ‘peer users’ and the potential for this to disrupt the self-regulation of academic research as a profession. Whereas engineers, having noted the full involvement of users in Panel G of the 2008 RAE, suggested that “it would be regrettable and a backward step, if they became marginalised by being involved only in the assessment of Impact” (Royal Academy of Engineering), for others, the involvement of users in assessing outputs would contravene a basic tenet of peer review (NAMHE). If this were the case, the 1994

Group felt they should only have an advisory role. Disputes over the scope and parameters of involvement by research users are disputes over the very delineation of the professional field *either* as an autonomous academic domain, *or* as a heteronomous domain where practitioners and academics interact. Most contributors to the consultation perceive this as a dichotomous choice, but proponents of the 'triple helix' concept suggest that the renegotiation of relations between academic, commercial and political fields that has taken place over recent decades may be producing a new institutional structure in which autonomous and heteronomous knowledge production spaces co-exist and co-evolve (Leydesdorff and Etzkowitz, 1996). Other authors suggest we have seen an evolution of bodies with 'transinstitutional orientations' that combine cross-sectoral networks with systems of quality control that conform to high academic standards even when research users are increasingly represented on programme committees, citing the post-1990s British research councils as a case in point (Benner and Sandstrom, 2000). The proposed structure for REF panels suggests a search for a similar logic. Bringing research users into an assessment process reliant largely on peer review, conducted under the auspices of academic-led panels, is different from situations where science is judged in a 'foreign' court, for example in the mass media. In the former case, the rules of 'credibility contests' can still be set in accordance with field-specific procedures for conferring prestige, whereas in the latter they cannot be.

Accordingly, the British Academy's response to the REF consultation argues that "it is less important who should have the formal responsibility for making the impact assessment and more that there should be a shared understanding between users and producers about the importance of quality" (British Academy). Some respondents seemed conscious of the need to develop a shared understanding by placing emphasis on the need for training or induction for peer user reviewers (SCUDD, UCET), but others felt that 'arms-length' membership of panels would always reduce the consistency of panel judgements (FARMER). Research on the type of 'expert review' proposed is non-existent, although some lessons could be drawn from research on the use of peer review in assessing interdisciplinary research: Laudel, for instance, demonstrated that a credible peer review process was achieved in a German interdisciplinary research programme through "the relative empowerment of the applicants and the enforced learning of the reviewers" (2006, p.67). By allowing considerable space for communication (including two-day site visits), misunderstandings were avoided, common views could emerge and trust in the reviewers' competence could develop. This suggests that if 'expert review' fails to make room for substantive communication across the whole actor constellation that constitutes each REF sub-panel, it may fail to achieve credibility, because the heterogeneous college of peers will not have had time to develop a shared understanding. Findings from the impact pilot exercise are reassuring in this regard: none of the panels noted any major judgemental discrepancies between academic and user reviewers, though it was also stressed that the process of induction needs time, which may inhibit the recruitment of 'peer users' to panels (HEFCE, 2010b, p.23).

3.2 Impact narratives and case studies: a rich terrain for boundary-work

The impact of science on society is one of the key stakes in the ideological 'boundary-work' (Gieryn, 1983,

1999) of scientists competing for material and symbolic resources at the level of both inter- and intra-field struggles. Boundary struggles concern both the relationships of autonomy/heteronomy between science and other fields of activity (e.g. politics, the economy, religion) and the internal struggles within the scientific field between differently-positioned actors (e.g. new entrants and established players, proponents of competing paradigms or methodologies, disciplines). Gieryn argued that there are three sorts of dispute which generate boundary-work: the establishment of a new field of professional activity (expansion); the entrance of new actors to an existing field and the ensuing struggles over status (expulsion); and the defence of scientific autonomy against increased external constraints (protection of autonomy) (Gieryn, 1983, pp.791-2; 1999, pp.15-18). Although it is the latter situation which has most obvious relevance to debates around impact in the REF, all three types of boundary-work are invoked.

Since there is a genuine ambivalence about the status of scientific knowledge in relation to the social world, this relationship can be narrativised in alternative ways in the pursuit of particular interests. “Scientific knowledge is at once theoretical and empirical, pure and applied, objective and subjective, exact and estimative, democratic (open for all to confirm) and elitist (experts alone confirm), limitless and limited (to certain domains of knowledge).” (Gieryn, 1983, p.792) Accordingly its impact on society can be and has been accentuated or downplayed in the public discourse of scientists depending on field position and historical circumstances. Quite often contradictory accounts of science have been deployed simultaneously in relation to different audiences or over different stakes: thus Victorian scientists, still trying to establish the credibility of a new category of knowledge, were apt to stress empiricism and social utility in order to differentiate science from religion, but to stress theoretical depth and disinterestedness in order to differentiate science from engineering (Gieryn, 1983, pp.783-7). We need not look far for contemporary examples: the cross-disciplinary initiative 'Making a Case for the Social Sciences'⁷, amounts to a concerted effort to 'market' the impact of social scientific knowledge, and to demonstrate how it informs social, economic or political innovation, “get[ting] beyond our resistance to crude notions of utility” as the President of the British Sociological Association, slightly ambiguously, put it⁸. More or less simultaneously the University and College Union launched a petition against the inclusion of impact considerations in the REF. Called 'Stand Up for Research'⁹, it sought to draw a clear line between science and its social or economic applications, making ‘resistance to crude notions of utility’ a badge of honour. In the former situation, where the stakes are material resources, “science gets 'impurified', erasing the borders or spaces between truth and policy relevance”; in the latter situation, where the stakes are autonomy to define problems, “science gets 'purified', carefully demarcated from all political and market concerns, which are said to pollute truth” (Gieryn, 1999, p.23). In *both* cases, it is apparent that “every scientific stance also includes a political stance” in the sense that changes in governing knowledge paradigms as well as more strategic positioning strategies

⁷ See <http://www.acss.org.uk/MakingtheCaselaunch.htm>

⁸ See <http://www.britisoc.co.uk/about/Impact2.htm>

⁹ See <https://www.ucu.org.uk/index.cfm?articleid=4207>

have to be understood in relation both to the interests of actors within the scientific field and to the external construction of a political, economic or social demand for scientific knowledge and expertise (Pollak, 1976, p.121). Certain disciplines are positioned closer to users and have a greater interest in evaluating impact: the survey of international experience that HEFCE commissioned for the development of the REF noted the prominence of health, medical and pharmaceutical sciences in pioneering impact evaluation in Australia and the Netherlands, for instance (RAND Europe, 2009). Following the advice of this report, HEFCE has allowed for some flexibility on the part of disciplinary panels to develop independent criteria and indicators (2011, p.5), although not to vary the weighting given to impact as suggested by RAND Europe based on the Dutch model of research assessment (2009, p.57). Even within disciplines, however, attitudes vary in the course of time, influenced by both the intrinsic development of scientific fields and the external gaze of society, and often assuming a cyclical dynamic: for example, newer disciplines may be more apt to look for external validation only to become more inward-looking once they acquire a certain level of prestige within the academic community; conversely, a tarnished public image can prompt a discipline to pursue the opposite strategy, as was the case with French sociology which, following a period in which professionalism was pursued through political engagement¹⁰ adopted a form of “political self-censorship” between 1968 and the 1990s, which permitted it to recover its scientific credibility – its power to define social problems autonomously – and subsequently allowed sociologists to re-engage in public debates from a position of independent authority (Neveu, 2003). Evidently, the REF has become an arena for the pursuit of both kinds of autonomy-defending boundary-work, which followed its own micro-cycle, so that the first consultation was characterised by impurifying boundary-work as respondents invoked the social and economic value of research to highlight one of the weaknesses of bibliometrics (HEFCE 2008, para 17), but once this devil was replaced by the spectre of impact, respondents to the second consultation tended to engage in purifying boundary-work, opposing a scholarly ‘pull’ to the government ‘push’ for impact measurement (cf Donovan, 2008)¹¹.

The REF, however, also intervenes in expansionary and expulsionary boundary-work, the former through the composition of panels and sub-panels, an issue beyond the scope of this paper; the latter through assumptions about the units which will make submissions about the impact of their research. Assessing impact requires different approaches depending on whether the focus is on the individual, the level of the research itself or the organisational level (Nutley et al., 2007). The impact domain of the REF focuses on the research unit, a decision which was justified on the grounds that “assessing the impact of individual research outputs or individual researchers would be unworkable ... and assessing the impact of whole institutions would be too coarse” (HEFCE, 2009a, paragraph 53c). HEFCE claims that this level of analysis met with “widespread

¹⁰ In the mid-1960s, for example, Alain Touraine exhorted that “sociology can only become a profession ... [by] creating outlets other than research and teaching in themselves” (cited in Chenu, 2000, p.49).

¹¹ An example of this shift in emphasis is to be found in the British Academy's responses to the two consultations: whereas in the first case (British Academy, 2008) the Academy was anxious that the REF should not create disincentives to public policy engagement (which, it argued, could only be measured effectively by peer review), one of its concerns about the revised proposals was that the impact element risked incentivising friendly policy advice and penalising research critical of government policy.

agreement” in the second REF consultation (HEFCE, 2010, paragraph 38). It is envisaged that impact case studies will often cover collaborative work by research teams (HEFCE, 2009a, paragraph 61). At first sight this might appear to indicate a hidden assumption about knowledge production based on practice in certain disciplines, such as the lab culture of some of the natural or biological sciences, but, as Garforth and Kerr point out, there is a longstanding critique within science and technology studies of the view of researchers as individualised actors (2009, p.26), and their case studies demonstrate that in both the biological and the social sciences knowledge production is a collective endeavour, incorporating interactions between scientists and non-scientists, such as when it involves defining common positions on ethical questions (in the case of the biological scientists) or putting together a team to present findings to civil servants (in the case of the social scientists) (ibid., pp.30, 35). The proposals were also clear that “the REF will assess excellence at the level of coherent research units” (HEFCE, 2009a, paragraph 25). This could counteract the tendency in RAEs either to take as units of assessment departments organised to structure teaching (McNay, 2009, pp.38-9) or to submit “a collection of research staff which do not necessarily work together in one group, but are allocated to the subject area where they are most likely to achieve a high score”¹² (Barker, 2007, p.4). Although some respondents urged that, given the merging of panels, “submissions [should not be expected] to portray a single, coherent, research environment” (1994 Group), more respondents seemed to endorse coherence, with some using it as an argument for allowing multiple submissions to a unit of assessment from a single HEI (FARMER, Universities Scotland, Guild HE).

Furthermore, it would be difficult to narrativise impact at the level of research units without recognising the contribution of individuals who play a facilitating or coordinating role as members of, or at the margins of, research units in relation to knowledge exchange with users of research. There is a tension between the desire “to simplify the categories of staff that are eligible for selection by institutions” for the output element (HEFCE, 2009a, paragraph 32) and the intention that the REF will assess coherent research units. HEFCE's summary of responses to the second consultation noted as an 'issue' “whether the activity covered within the impact and environment elements of the REF would be linked explicitly to the selected staff [for purposes of the output domain], or to the wider 'unit'” (HEFCE, 2010, paragraph 14). Given, however, that there was 'general support' for the alignment of environment reporting data with those already collected by the Higher Education Statistics Agency, it was noted that this would imply the inclusion of staff in the unit not designated as 'research-active' (ibid., paragraph 60). Hence one consequence of introducing the impact domain may be a de facto extension of the object of assessment. Indeed the case studies HEFCE published as examples of good practice from the impact pilot exercise indicate that some research units would take advantage of the ability to delineate the eligible population differently for the different REF domains, as they commonly either referred to collective rather than individual actors (groups, teams, units) or named Research Assistants and postgraduates who contributed to impact achievements but who may not have been submitted

¹² In fact, the RAE did stimulate the development of research centres or formal groups within some departments due to the perceived advantage of being able to construct a coherent narrative of a research unit (Lucas, 2006, pp.95-132).

for assessment of outputs (HEFCE, 2010b).

There are therefore reasons to believe that impact narratives and case studies may capture the collective aspects of scientific knowledge production better than the RAE or the output domain of the REF. However, if the focus on the level of the submitted unit (institute, department or research group) might reflect, and even incentivise team-work and collective identity building at that level, it could also create disincentives to wider networking among researchers and research users. As some REF consultees pointed out, contemporary research in many disciplines, and particularly interdisciplinary research, is often organised in joint research institutes (Guild HE), loose networks of excellence and communities of practice based around sub-fields (MURG, MeCCSA), which are often international (CHUDE). Academic musicians claim that this may be the norm in their field (NAMHE). Network forms of organisation are likely to be especially important in the translation of research: computing researchers note that “a large proportion of computing impact is built on an open approach to innovation” such as open source software (UKCRC) and the Association for University Research and Industry Links commented on the prevalence of ‘extensive’ and ‘extra-institutional’ research environments (AURIL). Yet it remains difficult to narrativise networked research efforts using the proposed framework because this focuses on the level of research units and explicitly rules out the possibility of claiming credit for impacts realised by others. Doubts were also raised about the capacity of the REF to recognise the role of intermediaries beyond the research unit such as knowledge transfer professionals working for universities, Research Councils or subject associations (History & Policy), information brokers and industrial collaborators (Association of Heads of Psychology Departments), national academies (Academy of Medical Sciences), other disciplines and research units (HEFCE, 2010a, paragraphs 39, 45) and representatives of user organisations in the private and public sectors (Wellcome Trust).

Given that a previous review of UK higher education raised concerns that the RAE discourages the development of “a stronger sense of co-operation and partnership” between institutions (Dearing, 1997), discrepancies between evaluation templates and research practice are evidently not a problem peculiar to the impact domain of the REF. Indeed Felt and Stöckelová contrasted the ‘amoebic’ character of organisational arrangements for research and their representation in “policy documents and procedures that imagine them rather as stable and durable entities” (2009, p.103). In fact, expulsory boundary-work is probably unavoidable as long as researchers are competing over limited pots of public (and private) funding. The proposed impact narratives and case studies seem likely to create some scope for weaving more integrated storylines at the level of research groups, but the overall structure of the REF is unlikely to mitigate competition at the inter-institutional level.

3.3 ‘Building on’ research: single or multiple moments of translation?

One approach in science and society studies treats research and societal impact as interdependent in a temporal fashion, without, however, implying any fixed sequence. The relationship between research and action is often best modelled as a dynamic, interactive and multidirectional process where elements of the

process can occur simultaneously or in different sequences (Ward et al., 2009a & 2009b). In effect, all research can be viewed as inherently *translational*, since it involves movements from macrocosm to microcosm and back again, through acts of delegation, intermediation and representation (Callon, 2003). Callon argues that the researcher is spokesperson for the natural or social phenomena in question (understood as part of an actor network). Thinking about impact then becomes a crucial phase in all scientific investigation, since the choice of partner, collaborator or beneficiary conditions not only the social effects of knowledge but the type of knowledge that will be produced. Importantly, this does not undermine scientific autonomy, but merely displaces it. Autonomy is achieved not by excluding society from the selection of problems, nor by researchers' self-exclusion from the use of knowledge, but by fabricating institutions that ensure autonomy for the moments of knowledge *translation* between specific local situations:

it is this autonomy, that of the movement [of knowledge], that must be preserved at all costs by what we call the scientific institution. It is at the heart of this movement that the sociologist, or any other scientist, must meet and discuss [their research] with colleagues, because it is in this movement that he emerges from the local [context] to fabricate an equivalence, stretch out a network, and he can only do this surrounded by other sociologists attached to other places and other actors. Science is not born from the taking of an outside perspective ... It is generated by the double movement of cooperation and translation, attachment and detachment. (Callon, 1999, pp.74-5)

One form of translation is the 'engaged neutrality' proposed by Heinich (2002), effectively an 'end-of-study' model of knowledge transfer in which the sociologist (in her case) acts as 'detached' researcher as long as the research process is not complete, and then switches into one or both of the socially/politically engaged roles she calls 'expert' and 'thinker'. But Callon's translational model does not assume that such a rigid temporal distinction between intellectual roles is always realistic, instead preserving what may be very ephemeral moments of detachment, while emphasising that attachments are equally intrinsic to research processes. It is the acts of translation across boundaries – the 'scaling down' of the real world in order to model it, the discussion of findings with fellow scientists, the matching of the content of one's innovations to the context of application or use (Callon, 2003) – that become crucial to an understanding of the institutionalisation of scientific knowledge production and its relations of autonomy/heteronomy with knowledge production in other fields.

With this in mind, it is debatable whether the proposed structure of evaluation in the REF really leaves room for research units to describe the variety of interactive processes through which their work can have an impact on numerous different potential users. The sticking point is the insistence that impacts claimed have to be demonstrably "built on excellent research" (HEFCE, 2009a, paragraph 53a). One consultation respondent argued that "the most significant impacts from research do not always stem directly from excellent research and is [sic] often a product of bringing together multiple strands of research which will have taken place over a significant length of time." (Royal Academy of Engineering) The Research Councils interpreted the formulation as too reminiscent of a "research push [approach], rather than a two-way

knowledge exchange process” (RCUK). Universities Scotland also criticised HEFCE's implicit understanding of impact as “simplistic” and liable “to focus effort on 'spinout' like linear processes and undermine the richer models of engagement between the research community and innovation.” HEFCE's revision of the template for case studies after the impact pilot exercise may even reinforce a ‘research push’ approach, having re-ordered the questions “to follow a narrative that starts with the research, and then explains the impact” (HEFCE 2010c). While HEFCE stresses that this is not intended to imply a linear model but to make the cases studies “easier to assess” by the panels (ibid.), the result is a template which is more amenable to those with a linear tale to tell.

What researchers do to realise impact can neither be easily separated from research nor reduced to activities directly connected to research. Numerous consultees objected that researchers realise impact through intermediary activities like synthesis, advisory and expert witness activities (RCUK), teaching activities (School of Modern Languages, University of St Andrews), people flows (Society for Old Testament Study), informal learning (NAMHE) or through the media (MeCCSA). Some respondents indicated that they would prefer a parameter more akin to a measure of ‘esteem’ that was used in the 2008 RAE. The British Academy noted that “impact may often reflect the esteem and reputation of researchers and may not be tied to individual research outputs”, going on to argue that, particularly in policy work, “what users need is an authoritative source of advice in the field”, and “some consideration of 'esteem' in relation to impact therefore needs to be considered” (British Academy). The Conference of Heads of University Departments of Economics argued that “it is often difficult to attribute the opportunity to make an impact to any given piece of research: instead, it can arise as the result of forging a reputation ... We believe it is essential that the REF recognises this route to having impact” (CHUDE). The UK Computer Research Committee felt that “esteem is more tangible and easier to assess than impact” (UKCRC). If it is important to evaluate impact, these respondents argued that it is necessary to extend the scope of the exercise to cover roles and activities of researchers that may not necessarily produce tangible research outputs. This would be in line with definitions of the researcher's role contained in the UK Concordat to Support the Career Development of Researchers and the European Charter for Researchers.¹³

There is a similar rigidity to the proposals in the stipulation that, for REF purposes, impacts claimed must build upon research carried out *in a specific unit*. This makes it difficult to describe the often complex sequence of moments of attachment and detachment which characterise real knowledge flows between research and action, including the circulation of ideas among colleagues, ‘translations’ which Callon (2003) identified as a key part of research. During the consultation, economics heads expressed their belief “that impact emerges from collegial interactions and sharing of research amongst the research community across

¹³ The Charter says: “evaluation and appraisal procedures [for researchers] should take due account of their overall research creativity and results, e.g. publications, patents, management of research, teaching/lecturing, supervision, mentoring, national or international collaboration, administrative duties, public awareness activities and mobility” (EC, 2005, p.22). The Concordat includes advancing knowledge, transferring and exploiting knowledge and dissemination among researchers’ responsibilities (Universities UK et al., 2008, p.12).

the sector, both within disciplines and across cognate disciplines. Dictating that impact must evolve solely from the submitting unit militates against such collegiality.” (CHUDE) Computing researchers felt that the definition of impact should recognise the iterative relationships between research groups across the globe working together in an ‘open-source’ mode to develop ideas to the point of recognisable impact (UKCRC). Crucially, these forms of scientific communication cannot be neatly separated from the ‘pure’ research process either spatially or temporally.

Thus in spite of the insistence that “the process through which research leads to impact is non-linear” (HEFCE, 2009a, paragraph 55b), the present proposals for the REF risk implicitly favouring an ‘end-of-study’ model of impact retraceable to the activities of a distinct research unit and artificially isolated from a range of complementary activities, which does not adequately reflect the way much research is done.

4. Discussion: rebalancing academic autonomy

The reasons for the disquiet in the academic field over the perceived threat that the proposed REF structure presents to autonomy are understandable. In the first place are perceptions that if research has to demonstrate its social and economic impact, this amounts to an encroachment onto the academic field by what Bourdieu called the ‘field of power’, where hegemonic conceptions of what is socially or economically beneficial are determined. Secondly, the academic field had invested a lot of symbolic capital in the RAE which, despite all the criticism that has been directed at it, has the advantage of continuity: any major structural or processual change is likely to be regarded with suspicion, for fear that it may either make comparisons over time problematic or introduce measures which are untried and untested, or under-theorised. The need to monitor how any new system affects actual behaviour was stressed by numerous respondents to the second REF consultation, and also cited as grounds for starting with a lower than 25% weighting for the impact domain, at least until its behavioural effects are evident (CST; HEFCE, 2010a, paragraph 29). HEFCE responded to these reservations by reducing the weighting to 20% for the first exercise (HEFCE, 2011).

Finally, the consultation itself opened up a powerful space for the pursuit of one of the most fundamental struggles the academic community can engage in – to institutionalise a particular vision and division of science as a social space and of the relationship between science and society. The question of impact, which is always implicit in any account of science or scientific research, merely makes these struggles more open and explicit.

Where autonomy is at stake there is inevitably competition between regions of the academic field, and between vertically-differentiated units. For example, Kerr and Lorenz-Mayer (2009) describe the uneven distribution of autonomy in the context of particular research units, and the resultant tensions between individual projects, group projects and the policy-driven projects for broader ‘networks of excellence’ on a European or global scale. Some of these tensions are structural, while others are more strategic. Structurally, it is axiomatic that no professional field can remain professional in the proper sense of the term without the

existence of boundaries that distinguish its particular forms of knowledge production from others, and one of the boundaries is a peer-controlled assessment system paying primary heed to the scientific quality of knowledge produced by research. This can explain the abandonment of HEFCE's initial plans for a metrics-only evaluation framework in spite of evidence that retrospective metrics predict the actual RAE results reasonably well (Butler, 2007; Butler and McAllister, 2009): for the issue was not the results themselves but the integrity of professional identities as self-regulated projects and reflexive communities¹⁴. Conversely, however, a defining characteristic of professions is the accomplishment of specialised tasks that are socially necessary, and some types of research and researcher are linked to a discourse of professionalism that emphasises the capacity to apply scientific methods to societal problems, working closely with 'users' (Felt and Stöckelová, 2009, p.109). Strategically, it is demonstrable that professional projects often involve episodes of purifying and impurifying boundary-work, with the latter likely to increase in relevance when the political and economic climate emphasises transparency, accountability and value for public money (Warry et al., 2006), when many scientific discourses have become thoroughly mediatised (Ponet, 2007), and when a generalised shift to more participatory modes of governance goes hand-in-hand with diminished *a priori* public trust in expertise (Smith, 2009).

In a sense, therefore, the maintenance of professional integrity seems to require boundaries that sustain both autonomy and heteronomy. The triple helix idea theorises how this improbable balancing act is achieved via the co-evolution of academia, industry and state to produce "a supplementary layer of 'knowledge development' ... [which] does not efface previous discontinuities [between fields], but rather constitutes an additional, new discontinuity" (Shinn, 2002, pp.600, 606). In other words, heteronomy is bracketed in a dialogical space between the academic, industrial/corporate and governmental/public fields, a 'fix' which preserves the autonomous logic of knowledge production within each field. Academics enter this dialogical space to accomplish a number of tasks that do not necessarily produce recognisable research outputs but are inherently connected to research, such as to negotiate the social demand for particular types of scientific knowledge, contest political and economic constraints on their research agenda or challenge illegitimate uses of their research. Introducing impact assessment to the REF could be seen as constituting such a space for the representation and regulation of science-society relations (Latour, 1993), in which researchers are prompted to explicate impact by describing the actor networks (or 'solidarities') that frame their knowledge production activities, the links to underpinning research and the mediating communication processes, and in which these claims can then be scrutinised jointly by peers and 'peer users'. Another such dialogical space is being instituted by Research Councils and other research grant providers, as they develop structures and procedures to account for the impact of research, and yet there are no signs that this has significantly weakened the role of Research Councils as boundary organisations – they remain able to protect the key values of their disciplinary communities by appropriately 'translating' external constraints such as government policy

¹⁴ For example, HEFCE's summary of responses to the first REF consultation states that "there was consensus that ... bibliometric indicators are unlikely to be free from distortion, and it was felt that some form of moderation by expert panels would be necessary to provide confidence in the outcomes" (2008, para 11, emphasis added).

(Henkel, 2005, p.162) into funding strategies that “leave [researchers] ample room to satisfy their research interests.” (Leišyte et al., 2009, p.128) This paper has not covered the funding of research, but it is clear that research evaluation and research funding mechanisms constitute closely related opportunity structures, each one contributing to boundary-work through which academic autonomy/heteronomy is managed, so that developments in one 'sub-field' must take into account developments in the other.

5. Conclusion

Given that the formal assessment of impact delineates an ‘elsewhere’ for the consecration of research, where its value is assigned in part by an external gaze, there is a danger that assigning too great a weight to impact will diminish the autonomy of the scientific field by detracting from the uniqueness of the knowledge produced there, the level of agreement on the principles for consecrating it, or the primacy of the opinion of one’s peers / competitors for distinguishing ‘excellent’ research and researchers (Bourdieu, 1975, p.95). Yet if the relationship between science and society is characterised by greater heteronomy than previously (if research is becoming steadily more involved with society, the economy and policymaking), field autonomy would be most seriously undermined by a *lack* of regulation of these relations – i.e. by a lack of reflexive knowledge about how research gets used and what the risks are to research quality.

On the contrary, impact evaluation could enhance individual (or group) researcher autonomy if it allows for a more ‘polyphonic’ narrative about the purpose and relevance of their research (Crang, 1992). This would give researchers more control over their research agenda and approach and the formatting of outputs. An REF in which impact is taken seriously could lessen the pressures from the increasingly insistent ways in which academic performance is managed in respect of research quality via institutional 'control regimes' (Lucas, 2006) and powerful international benchmarking exercises, which is significant given that autonomy at the individual or small group level is associated with scientific creativity (Heinze et al., 2009).

Unfortunately, the REF proposals narrow the scope for realising these advantages because the model of knowledge translation assumes that impact 'builds on research' and impact is traceable back to a distinct research unit in a single institution. Whereas the latter reflects issues that go beyond the impact domain (since it is the whole structure of the REF and its predecessor RAEs that predicates rigid and sometimes artificial units of assessment) the stipulation that impact builds on research seems to have been introduced as a concession to conservative elements of the academic field – in the wish to reassure them that fundamental research remains paramount. A less constraining definition of pathways to impact could be adopted if HEFCE were prepared to challenge the dominant position of these interests in the academic field¹⁵.

Just as impact planning can be used conceptually as a tool for thinking rather than being merely a tick-box exercise (Ward et al., 2010), the assessment of impact can be more than a reporting exercise. The REF could

¹⁵ This is not a call to challenge the *legitimacy* of curiosity-driven research: it is a call to challenge the distribution of symbolic capital in the academic field (e.g. the prestige attached to certain types of output) and its conversion into economic capital in the form of rewards such as research funding and career progression, recognising that any professional field is a space subject to ongoing 'classificatory struggle' in which alternative hierarchisation principles can be linked to group interests (Bourdieu, 1984).

help to embed impact considerations, already present but under-examined in most forms of scientific research, among the routine reflexive tools for the research process and to place them within the context of the other activities that researchers and research units perform. Fears that it would replace the regulation of an autonomous field of knowledge production by peers are sincere, but could be addressed by emphasising that what is envisaged is not a new value scale but rather a complementary mechanism for regulating the dialogical spaces that are intrinsic to the way research is currently organised within (but also beyond) higher education institutions.

6. Appendix – List of respondents to second HEFCE REF consultation cited

University mission groups and representative groups

1994 Group

AURIL – Association for University Research and Industry Links

Guild HE

MURG – Modern Universities Research Group

UCU – University and College Union

Universities Scotland

Academies and Subject Associations

Academy of Medical Sciences

Association of Heads of Psychology Departments

BOCSS – Board of Celtic Studies Scotland

British Academy

CHUDE – University Departments of Economics

Conference of Professors of Accounting and Finance

Council of Deans of Health

FARMER – UK Forum for Archives and Records Management Education and Research

History & Policy

MeCCSA – Media, Communication and Cultural Studies Association

NAMHE – National Association for Music in Higher Education

Royal Academy of Engineering

SCUDD – Standing Conference of University Drama Departments

Society for Old Testament Study

UCET – Universities Council for the Education of Teachers

UKCRC – UK Computing Research Committee

Public Bodies

Concordat Strategy Group

CST – Council for Science and Technology

RCUK – Research Councils UK

Business and Charities / Professional Bodies

BHF – British Heart Foundation

Cancer Research UK

CBI – Confederation for British Industry

Wellcome Trust

Departments/Groups at HEIs

School of Modern Languages, University of St Andrews

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