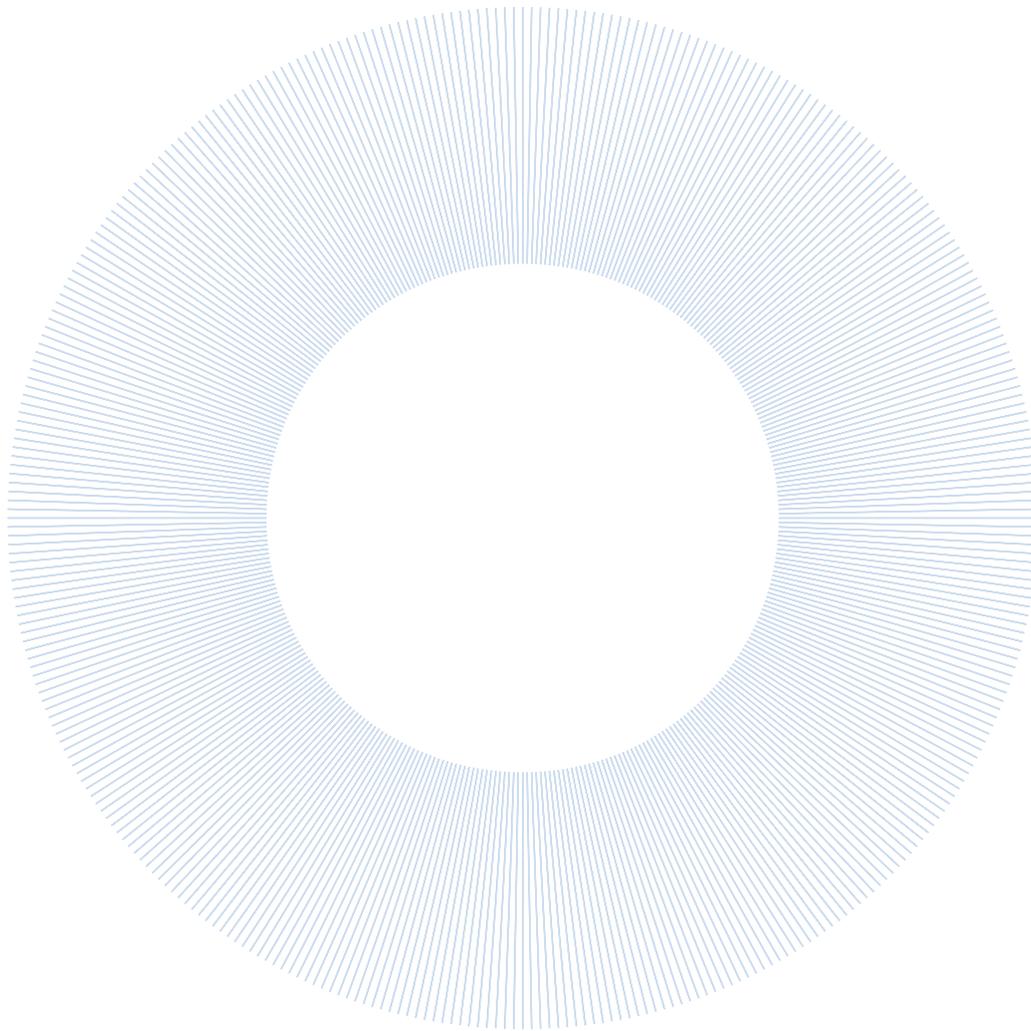# A Tale of Two Letters. Reflections on Knowledge Conversions

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About Insights

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Copyright

A TALE OF TWO LETTERS. REFLECTIONS ON KNOWLEDGE CONVERSIONS

This paper reflects on certain current trends in UK Higher Education. A letter from the Arts and Humanities Research Council (AHRC) stimulates a quizzical look at three of the academic's many personae, those of collaborator, owner and mediator. They point to the highly significant role accorded the conversion of academic knowledge (e.g. into useful communications). Questions about convertibility are further prompted by a letter with which the paper opens, an address from the field to the anthropologist that, like the one from the AHRC, speaks to the academic's responsibility to effect a conversion of sorts. At the same time, its divergent voice introduces some critical positions on current trends.

Two letters, the one personal, the other impersonal, written a decade apart and from opposite ends of the globe, touch on academic accountability. Together they provide a framework for the reflections I offer.

In 1999 Barat, a friend of mine from Mt Hagen in the Highlands of Papua New Guinea, came to England.[1] The prospect of the visit had raised expectations, and Barat brought with him a letter, politely but pointedly phrased, in effect demanding recompense for what I had learned in Hagen and specifically from him. Now these were not accusations of theft, that I had stolen knowledge, nor a request for tuition fees, nor for compensation of loss, but a demand to recognise that profit had been made out of it.[2] He might have said that I had found a *use* for what he had given that he himself could not realise. As I interpret it, the matter in hand was knowledge in the sense of personally acquired and assimilated information. He had relayed what he knew; in relaying it again through papers and books I moved in social circles to which he had no access. It was not just that I earned money for myself but that I had become a particular kind of a social person. (I come back to what this might mean.) Had he deployed this language, he would no doubt have said that knowledge created in one location was being used in another.

The letter was typed in English, mediated by a university lecturer, a Papua New Guinean academic from his home area. The academic used the language of intellectual property (IP) rights. In other words the plea – for it was as much a plea as a demand – was given a specific value by being converted into an idiom to which I would find it hard not to respond. The claim is not to be dismissed as rhetoric for the sake of gain, the letter went: one cannot build networks based on commercial principles alone. Rather, and I quote, the question to be posed is one of intellectual property rights: who owns the tree of knowledge – the one who planted the seed or the one who nurtured the plant? In accord with Hagen people's own ideas of recompense, accountability comes very close to liability: I had a debt to discharge. Barat's concern, I surmise, was that I was realising returns on his input in a world in which he had no part.

There was a sense here in which the context created the interest: it was the possibility of recompense – the expectation I had raised in suggesting he visit – that provoked the

claim. Interests can also change and people's claims appear in new guises, as has been the experience in developing countries encountering IP for the first time: new reasons for claims to share in wealth, new reasons for asking about the destiny of the knowledge one creates, present themselves.

This brings me to the second letter. A reassuring missive came round British universities in 2009 from the chief executive of the Arts and Humanities Research Council and former chair of the UK Research Councils consortium. Or rather, picked out in bold, there was a reassuring sentence: 'I cannot emphasise sufficiently that excellent research without obvious or immediate impact will continue to be funded by the Research Councils and will not be disadvantaged within the assessment process.' The rest of the letter was all about impact, its tone mild and cajoling. It is only reasonable for the UK government to expect the recipients of state funding to indicate the broader benefits of their research to the public at large. So how is information about the impact of projects to be captured? 'The demonstrable contribution that excellent research makes to society and the economy [...][is to be] embodied in the questions that applicants for research grants have to answer when they are completing the Impact Summary that is being introduced into application forms for all Research Councils.' These specify the conditions of accountability from the outset.

While the Research Councils do not mean that this will be the only form of assessment, the three questions (who will benefit from the research, how, and what will you do to ensure benefit?) imply that some sort of prognosis must be made before work has started. There is more reassurance in the letter – defining benefits and use is not to take away from other aspects of the application, just to 'add value' to it. The questions are there to encourage the applicant to envisage making an impact that will 'stimulate interest from wider stakeholders.'

It is not news to anyone in academia that the need to show impact, often summarised as usefulness, has been high on the policy agenda for supporting research ever since the British university system was brought under economic scrutiny in the 1980s. Each new round of exhortation seems nonetheless to be presented afresh, and the Research Council's letter reads as though it were pointing in a new direction. The end in sight is wealth creation (at its largest extent, for the nation), whether as a prerequisite for wellbeing or as paired with wellbeing as a separate goal. Either way, universities should be fostering knowledge conversion.[3]

The two letters both concern the responsibilities that knowledge brings. One asked me what I was going to do with the debts I had built up by using Barat's knowledge about Hagen social life in spheres to which he had no access; the other informed me that being able to show use in the form of impact would shape future government research funding even more than in the past. Both presumed a process of conversion, it being the conversion that would reveal a (new) value for the knowledge. Thus Barat assumed that, insofar as it was relayed to others, the knowledge I had gained had brought me personal benefit; the Research Council, assuming knowledge brought the researcher personal benefit, wanted to see it being turned into benefit for others. There are some questions to be asked here about convertibility.

I divide the account into two rather unequal parts. The first, stimulated by the AHRC letter comments on current trends in Higher Education, with a focus on three of the academic's[4] many personifications, collaborator, owner and mediator. The second part returns to the Hagen letter, and to critical positions on those developments.

Part I: Converging Personifications

Collaborators *and owners*. The eagerness with which university administrations ally themselves with the knowledge economy and its associated information revolution seems self-evident.   Such eagerness is endorsed in widespread assumptions about usefulness. Knowledge created in one context is not just being used in others, it is felt it *should* be so 'used.' For the implied conversion (across different contexts) thereby demonstrates a necessary potential for transmissibility, a pre-condition for social impact. In this view, knowledge should be turned to profit, not just in the narrow sense of intellectual property – though intellectual property rights have a crucial role – but in response to the much broader appeal to the academic community to realise its assets. And if value can be created by the use to which the production or creation of information is put, the product or the creation must carry within it a potential for conversion. The role given to the convertibility of academic knowledge is a largely unexamined side of its 'usefulness.'

Indeed, the role can be downplayed, as would seem to be the import of the managerialist notion of 'adding value' (Miller, 2003; 2005). This was the tenor of the Research Council's letter. To claim that showing the impact of research adds value to the research – and augments or enhances it – is also to claim that the research is not fundamentally altered thereby.[5] It is simply asked to yield information that can be put to use. This assumption implies a particular notion of information as it has been described by Ezrahi (2004, p. 257), namely as knowledge 'stripped of its theoretical, formal, logical [...] layers'; information is more 'socially transportable' than knowledge.[6]

The added-value claim assumes, then, that nothing is really taken away from the original by its extension elsewhere. Taking from other academics is part and parcel of ordinary scholarly interchange, accessing other people's published work being intrinsic to this. As with the circulation of academic papers, it is confirmation or criticism for which academics generally look; the figure of the author (reputation enhanced or tarnished) is reproduced in the citations. However, when the legitimacy of what an academic produces comes to depend on the 'added value' that he or she can demonstrate, that prior circulation and the social and scholarly values it may have created drop from the picture. Instead the figure of author is given new characteristics.   Two personae have come to be regularly attached: that of collaborator (with colleagues, with users), and that of owner.

One of the rubrics under which added-value is evident is 'knowledge transfer.'[7] Transfer makes explicit what is already implicit in the idea of turning academic output to use.   For what government agencies and the like generally mean by 'use' is deployment outside the immediate academic context, or at least outside the home discipline. Identifying 'external' collaborators is a way of pointing to 'wider' audiences.[8] Collaboration with colleagues across ostensible disciplinary lines can thus appear as one step towards demonstrating external interests and thereby registering impact.   Indeed collaboration with non-academic organisations is the first of the suggestions in the AHRC letter for how humanities and social science researchers can show that their work does have impact, while collaborative research (including across academic institutions) is the first entry in the UK Research Councils' website Knowledge Transfer portal (as consulted September 2009 / May 2010).   The inference is that internal circulation, however defined, does not count: to qualify, 'knowledge transfer' must demonstrate that what was generated in one context can be used in another.

Being able to show a monetary conversion (someone willing to pay for use) is the best evidence of all.   For usefulness is also, in this productionist model, being profitable, and it is possible in some circumstances literally to generate financial profit. From here can come the demand that academics take explicit ownership of their work in order to exploit its potential on their university's behalf. I dwell on this at somewhat greater length in order to point to an interplay between contexts and interests in knowledge conversions.

Recasting authors' interests as that of owners' is especially likely in the context of university-produced scientific knowledge derived from public funding. Academics are urged to treat their output as assets, as property. Urging comes from government, individuals and institutions alike being exhorted to behave as property owners. As public bodies, universities have a positive responsibility to protect the investment made in them, making sure returns come in the form of benefit to the public purse. Thus, in respect of patents, the UK Research Councils have for some time obliged universities to take on the ownership of intellectual property created in the course of research.[9] Universities are then in a position to assert claims to any accruing economic benefits, which are shared with the researchers. Implied in these conversions is a double responsibility: to disseminate knowledge as encouraged by IP; to return public investment by allocating IP to the university understood as a return to 'society.'

Academics become defined as owners, then, when they are required to take the university's interests into account. At the same time, the interests of these parties may be distinct. Under copyright, economic returns may be less significant to an author than claims to own the work as its identifiable creator. It is accepted that academic work is based on assumptions different from those imposed by other employer-employee agreements. Copyright steps in to protect authors who wish to exercise something akin to personal ownership of the works on which their reputation rests. By custom, most UK universities waive their interest in the publications, papers, lecture notes and research materials of their staff, and in effect academic staff (authors) hold the copyright. The differentiation of social interests is clear: university and employee pursue now joint and now parallel concerns in different areas of intellectual property. Interests define the contexts in which IP applies.

And contexts can define interests – people seize on new opportunities. One of the conventional rationales of the patent process is that it circulates information about how the artefact or device was made. Such public disclosure is generally taken as a return for the right of the inventor to derive benefits from licensing the product's use to others. Some scientists have voiced the opinion, apropos non-scientific interest in their research, that it is the patent system itself that re-creates a scientific outcome as an 'invention,' and thus posits a specific kind of interest in it (e.g. Hirsch, 2004, p. 184, after Rabinow, 1996).

Authors and inventors. Let me burrow a little deeper into the designations of author and inventor. The historian of science, Biagioli (2006), shows how in the development of the modern patent from its eighteenth-century form in Europe and the United States inventors became construed as authors.   Not only did they produce the invention as an industrially useful device, but they had to demonstrate its use through documentation.   What was evaluated by the patent office was the adequacy of the written account. This conversion to documentary evidence, he argues, separated the material invention from the idea of it expressed in writing and illustration, so that the idea came to be regarded as the essence of the invention (2006, p. 1143). It was like the shift that copyright made from book to text (e.g. Woodmansee, 1994).   Indeed, if scientific inventors were made into 'authors,' so too literary authors became 'authors,' that is, they enjoyed a potential legal relationship with their work as its creator.

Yet academics sometimes describe the propagation of ideas as though they were independent of authorship: they appear as self-reproducing modules (Abbott, 2001). Certainly in the social sciences, the names of practitioners can become associated with intellectual positions as though the ideas unfolded by themselves and names got attached to them. This is especially true of key terms, models, paradigms. In social anthropology for a long time, the two terms 'culture' and 'social structure' divided and combined in people's works, and the works simply had to be examined to reveal this process. This is the kind of situation, what happens 'once we believe that ideas use us more than we use them,' that Fuller (2004, p. 479) sees as eroding the legitimacy of the intellectual. However, authorless ideas are interesting from the perspective of conversion. It is as though authors attach themselves (or are attached by others) to existing ideas while inventing new contexts for them. This makes for 'knowledge transfer' of a rather special kind. Key ideas find themselves open to re-embedding in new arguments and theories. No-one's interest is at stake in deploying the concepts of culture and social structure, until the point when interest is created in them by the terms being appropriated for a particular theory, that is, for a new context. Perhaps this is one circumstance in which the English language (through, for example, the passive voice) allows a writer to give agency to 'knowledge' itself – to the intense irritation of other writers who would attribute everything to named sources in known persons. Authorial invention appears to lie in the social scientists (and I daresay others) re-contextualising their key concepts and finding new interests in new associations with or citations of others.

Invention? If scientific inventors have a well-established genealogy these days as scientific authors (Biagioli and Galison, 2003), literary authors are not, conversely, generally regarded as inventors in the IP sense. Yet in the field of authorless concepts there is a sense in which literary authors 'invent' the context in which they wish to deploy an idea, and indeed often have some scope in relation to the names of their predecessors that they attach to it. Just as the patented device must be demonstrably usable, so too deploying certain theoretical constructs and defending or expanding them can only create value through the demonstration that such deployment has made a difference to a narrative, analysis or description. Authors as inventors: there has to be a performance of and not just an enactment of the ideas, for colleagues have to show one another how these ideas can be pressed into service.

Now much of this is regular academic practice, and that is the point. I have dwelled on authors and inventors to comment on one area (out of many) of what we might call indigenous conversion, that is, the kinds of conversions that accompany everyday academic work. The figure of the author or inventor already appears under different guises, undergoing conversions – back and forth from one identity to another – created through different contexts and different interests. Varieties of collaboration and ownership are already written into their interchanges. But appealing to collaboration and ownership to *require* academics to demonstrate the convertibility of what they know, as a matter of external impact, shifts the terrain. Otherwise put, the rhetoric of 'usefulness' is being applied to a sphere of activity already saturated with the diverse uses academics make of their knowledge; it is not added without consequence.

Mediators. Perhaps it is precisely in their efforts to convert what they produce or create into something useful, or otherwise show its impact, that authors (and inventors) may be eclipsed by mediators. They can become mediators themselves, or else turn to 'knowledge workers' or 'knowledge managers' as specialists in communication. Meanwhile universities hire 'academic developers' (Handal, 2008), variously known as staff- or educational- or organisational-developers, whether as midwives of change or as hands-on 'change agents.'

The 'mediator' (as in 'media')[10] is described by Osborne (2004) as an increasingly visible figure on the academic stage. He asks if we have entered a new era in the organisation of knowledge, and then deliberately deflates claims for novelty. Rather, he suggests, 'there is an increasing salience of a certain kind of intellectual attitude […] of what will be called the mediator' (2004, p. 431). He initially addresses the UK's think-tank culture. In connecting academic output to policy matters, think-tanks have been moving away from a leverage or advisory model of academic influence to a brokerage or networking one. The intellectual broker or mediator is 'someone for whom ideas are more like instruments than principles; a motivator of syntheses that "work," and have purchase' in effecting innovations (p. 435). Mediators make things newly 'useful'; they enhance the relational potential of people's capacities. If we imagine them as owners of networks, mediators are also the owners of social relationality (Corsín Jiménez, 2008, p. 240).

When creativity is seen to depend on mediation, what is displaced is both the context *and* the associated interests of the original creation (authorship and invention), that is, the mediators do not have to hold them in view. Significantly displaced as well are other ways of relating academic knowledge to the world beyond academia. Osborne (2004, pp. 440–1) argues that the mediator is not so much a passive intermediary between agents as an entrepreneur: 'for the mediator an idea is seized or appropriated as much as it is created out of nothing […] [And] creation essentially consists of such mediation […] [Indeed] ideas are of no premium unless they are capable of being "mediatised".' So run together here are the notion that novelty comes out of endless re-combinations of the old; the emphasis given to communication for its own sake, and the value put on making a difference that will have an effect. None of these is new. What is added by the figure of the mediator is the notion that (authorless) ideas are propellants 'to get us from one place to another, to move us along' (2004, p. 441). What are taken away are the characters of the mediator's predecessors in framing knowledge in the world – the legislator of big ideas, the interpreter in constant acts of translation and the expert provisioner of independent information (after Bauman, 1987).

The skills of mediation are those of diagnosis (of events and images), and a certain aesthetics of stylisation and branding, in a communicative mix of information with affective and entertaining effects (Ezrahi's 'outformations'). However, if the remit of mediation 'is the embedding of knowledge in a wider media culture' (Osborne, 2004, p. 444), 'it may be that the society of mediators just amounts to the media society itself,' with the consequence that there is no great transformation of knowledge (p. 435). Rather, what mediators make visible is conversion as such. We could say that in their hands the very act of conversion creates value. In other words, mediators need neither attach themselves to (pre-existing) contexts and interests nor invent them; it is not contexts and interests that define the conversions they effect. Their special creativity and productivity lies in cultivating the art of conversion itself.

In this they are like proselytisers for whom the act of conversion is all, demonstrated in the evidence of a before-and-after state of grace. What happens to other personae is a matter of indifference. Corsín Jiménez (2008, p. 233) draws on an ancient distinction between *showing*, to monstrate, and *showing that you are showing*, to demonstrate.[11] When value is put on demonstration, other contexts disappear, for knowledge (he says) appears to provide its own context. Value placed on the productivity of knowledge, that is, *its* potential for new creations, also displaces [my term] focus on other forms of responsibility.

For the academic, experiential and disciplinary knowledge run together, so we could say that knowledge in this conflated sense is a capacity that academics show in their person. To push the need to 'demonstrate' transmissible knowledge production is to call *persons* to account in

fresh ways.   Attention is directed away from the substance of work being done to the skills of those doing it. How do individual academics use their knowledge to productive and creative effect? How do they show not just their productions but their creativity in the creativity of their productions? Knowledge produced for auditing purposes requires of persons that they perform its 'use.' It has been proposed, for example, that the UK Research Councils should keep track of everything academics produce; 'impact data' would be gathered for five years following a research award, under an Outputs and Outcomes Collection scheme (*Times Higher Education*, 16 April 2009).[12]   Where it was not gathered, or indeed not gatherable, the academic could emerge as a liability for the university.

For if 'knowledge' as such is regarded as inherently productive and creative, a view seemingly embraced by the figure of the mediator, then any shortfall in its realisation can only be laid at the door of the academic. That is the person who has failed to seize its potential for conversion, letting slip the realisation of its usefulness and relevance to society, national wealth or whatever the target should be. Academics as unsuccessful mediators! This is not inconsequential for their social standing.

Part II: Divergence

There seem to be both logical and social problems with the notion that knowledge is ubiquitously a convertible, and can be made useful, or add value to something else, without cost. The logical issues are to do with promoting the value of convertibility detached from specifying what order of difference (for example, between contexts or between interests) will effect a recognisable 'conversion,' recognisable, that is, as a passage across domains.[13] The social issues are to do with that part of knowledge that concerns the person of the producer or creator, some of the ramifications of which can be captured by imagining a passage of sort from demands on academics to make information useful to demands that they make (their) knowledge useful.

What has Barat's letter, written from Papua New Guinea, to do with this? There is in fact a direct connection between the way it was phrased and certain of the contexts and interests recognisable in academic conversions. Different interests divide technology-rich exporting countries from technology-poor importing countries, but it may be to one party's benefit to align them for the sake of trade. Interests define contexts: in the 1990s international pressure from the World Trade Organisation was put on Pacific Island governments, including Papua New Guinea, to set up IP jurisdiction so that patent protection could be claimed there (see Hirsch and Strathern, 2004). The result was an arena for discussion about IP, and the local media played its part.   It was this that led directly to the terms in which Barat's friend wrote on his behalf: in addressing me, he was exploiting the rhetorical opportunities that this international concern for IP protection had created in Papua New Guinea. Contexts here define interests, and this was true a second time as well. If Barat had been sharing information, in the form of general knowledge, personal experience and specific expertise, the information was not 'owned' until the prospect of recompense came along.[14]

However, the letter itself challenges how we might think about the convertibility of knowledge when what is being converted is the kind of social person the academic is. Knowledge as a matter of the personal processing of information (analogous to disciplinary processing) carries identity with it. It cannot be enhanced without alteration: the status and capacities of persons are changed by new knowledge insofar as they now move in new arenas. This has of course always been a prerequisite of development programmes, and of revolution and reform

in general, not to speak of policies based on education to 'change the culture' (of this or that) or proselytising missions to save souls. And this is the encouragement and invitation in the AHRC letter. It is assumed that conversion improves or enhances the individual person by virtue of the very process by which knowledge held as a personal possession, so to speak, becomes visible, or demonstrable, and in this sense a potential public good. This in turn affects how responsibilities are perceived. Thus the AHRC letter, assuming that the quest for knowledge had brought the applicant personal benefit (for example, by way of consolidating a career or advancing a discipline), wants to see that being turned into benefit for others, at its largest for society.

Here the Hagen letter diverges. My debt to Barat is constructed through a set of assumptions rather differently sequenced. For a start, the comment that one cannot build networks based only on commercial principles indexes the fact of relationship – the debt between us speaks to its continuing relevance (and the knowledge created through that relationship was never my personal possession). Indeed, almost echoing the internal circulation of academic knowledge, I think Barat's letter assumes that it is precisely insofar as it could be relayed to others that the knowledge I gained has brought me personal benefit. It would not be any good to me unless it was circulated. I have interpreted this as the nub of his request. It was Barat's knowledge on which I had been drawing, as well as taking the information he offered, and what I absorbed as knowledge changed me, gave me in his eyes a status I did not have before. He could not accompany me into new spheres of influence, but then it is highly unlikely that he would have literally entertained the idea of doing so. On the contrary, he had given me a potential he could not and would not realise for himself. That was his gift: he had enhanced my social capacities. Any use others might make of this gift was irrelevant to the fact of the social expansion it brought me.

Now in Osborne's terminology, mediators are people who specialise in enhancing other people's capacities, and especially social capacities. I have converted that piece of information to use: the knowledge economy's mediator has afforded another way of seeing what I was given in Hagen. So why bother about a tiny difference in sequence? I think it in fact bears upon what we might judge some of the consequences of conversion to be. In the Hagen case a transfer of knowledge affects the sphere of social relations within which a person moves, and Barat was extrapolating that I had benefited this way. By contrast, managerialist demands to make knowledge useful may attach a capacity to the knowledge itself that makes it potentially (with the appropriate mediation) available to anyone. Yet we might not always be content with this open-endedness. This leads me to my conclusion, and to a couple of voices critical of convertibility in the Research Councils' mode. Whatever its end, knowledge conversion should not get rid of disagreement – not disagreement mediatised away as 'points of view,' but disagreement arising from the complexities of the world, and from the contexts and interests mobilised in the description of it.

Sometimes knowledge needs to be visibly attached to specific interests. In praise of controversy, Callon et al. (2009)[15] have called for the proliferation of debate. They are thinking of the rise in the last two decades of countless interest groups, consumer networks, publics of all kinds, in discussion over technological innovations such as mobile telephones, or medical-technical crises such as BSE (bovine spongiform encephalopathy). And would like to see more controversy, for it embroils actors in quite unpredictable hybrids of interests and concerns. The unpredictability is important.

The authors welcome the apparently haphazard, sometimes random, always heterogeneous interests that populate public concerns, including protests by interested parties agitated by

developments proposed for their own back yard. 'The aim is the survival […] of that improbable but irreplaceable being, the ordinary citizen […] [or] lay person' (2009, pp. 122–3). The controversies to which such interests lead often turn out to be in the cause of better science. For controversies overflow pre-existing channels of enquiry; they link up problems in (authors' phrasing) 'the real world.' In a time of uncertainty, it is through creating constant overflows of issues and actors that controversy breaks open the close embrace between scientist and policy maker, and challenges the position of science as a provider of expertise. Governance is also at stake: controversies enrich democracy. So, too, is common sense. When agents in market transactions ignore how their actions impinge on other agents, the overflow from their actions constitutes an 'externality' to which they are blind and which may well be to their cost (p. 235).[16] An example of the market's blindness to the interests of consumers was the BSE crisis in the UK. 'Why should enterprises producing animal feed be concerned about the distant and uncertain consequences for the consumer of beef of recalcitrant prions that will turn out to be sufficiently supple to cross the species barrier?' (p. 236). No-one can know everything, they argue, but we can at least be alert to issues that overflow the expertise – and I would add knowledge management – meant to contain them.

If sometimes knowledge needs to be attached to specific interests, then sometimes the contexts of knowledge production are best held distinct. Stengers (forthcoming), writes in praise of divergence to point out that there is no learning 'if there is no possible backlash […] if what you address is not able to display its own divergence.' By 'own divergence' she means not divergent from and thus in relation to another, but a trajectory defined on its own terms. She excoriates 'the multifaceted machine called technoscience […] in the process of redefining our own worlds in terms that makes them available for its comparative operation.' Proponents of technological innovation in effect convert an academically pursued science based on doubt into the readily useful form called scientific objectivity. Such proponents may act now as mediators, now as knowledge managers.

These writers see diversity under attack from the same source, the knowledge economy. Stengers has the darker tale to tell, namely of the death of science by knowledge management, where habits of criticism and counter-proposition are submerged in the cause of technical solutions. Challenged in a presentation to reflect on a transformed future for the relationship between industry and science, she said science would die ('I'm a Darwinist, species don't transform, they die!', cited by Winthereik, forthcoming). What would die was what allowed scientific practices to diverge along their own lines of flight. Indeed, both Callon and Stengers see controversy and scientific debate producing disparities that mean comparison between views can never be (in Stenger's words) unilateral. She quotes the essayist Péguy to the effect that 'no comparison would be legitimate if the parties to be compared are not able to display their own version of what the comparison is about' (forthcoming). In other words, in academic endeavour no one party should be in charge of the grounds of comparison. Nor is there any vantage point on the outside. While a plurality can always be aggregated into a single universe, even if it is no more than a universe of points of view, hybrid forums[17] resist aggregation.

The divergence between the two letters, then, has value in itself: each displays its own version of knowledge transfer. Yet despite the common emphasis on accountability, it seems to me that the Hagen letter is more in sympathy with Callon and Stengers than with the sentiments of the AHRC letter. Callon et al. wrote that there is likely to be a cost in agents ignoring how their actions impinge on others – in a democracy, they might say, people have to impinge upon one another. Stengers puts the fact of relationship rather differently. She is a philosopher speaking for science. We might say that she is 'taking care' of science, in the way that we

might also imagine taking care of other people's potential for relationship. There is a bit more here than enhancing capacity through facilitating networks and such like. Battaglia, for instance, uses the language of responsibility: 'the point is to accept responsibility for the social life of another, as a social person' (1999, p. 133). I have put a number of words into Barat's mouth: I suspect he would find most congenial a reformulation that laid emphasis on the care that I needed to take of him.

In not concealing where I have made use of other people's knowledge, or where I have followed an analysis that converts the value of information by changing its location from one context to another, I hope it will be seen that this is not a diatribe about usefulness and convertibility as such. How could it be! If anything, it is a diatribe against imagining one can talk about these concepts in the abstract, as though the effects and outcomes of applying them to academic knowledge were self-evident.

In writing this I have had the immense benefit of being for a while part of a company of academics who are mandated to take care, so to speak, of one another's disciplines. The gentle interdisciplinarity of the IAS offers an experimental space that would not be present if members did not assume responsibility for one another's flourishing.

Notes

[1] My first visit to Mt Hagen in the Papua New Guinea Highlands was in 1964. Like anthropological fieldworkers anywhere, over a lifetime I have benefited enormously from my contacts in Hagen, am much in debt to them for the knowledge they shared, have tried to discharge the debt in several ways but know I never can. Barat is a pseudonym.

[2] As is generally true in Papua New Guinea, authorship was not at issue either. However, it is also the case that certain types of specialist or ritual knowledge require payment if they are transferred, and an obligation to teach (as between kin) could carry with it the obligation of care on the part of the recipient towards his mentor (Crook, 2007). I should note that there is more to the letter than I focus on here.

[3] The several senses of 'conversion' include turning in position or direction, a change in character or function as when someone is brought over to a religious faith or political party, and the sense in which I mainly use it here, expressing one value in terms of another, as in converting research findings into policy recommendations.

[4] 'Academic' subsumes 'scholar' for present purposes.

[5] This is disingenuous. In fact the Research Councils encourage not only the specification of potential 'users' of research but their participation in the research process so that they can offer iterative feedback.   In the case of science, the type 2 knowledge economy of Nowotny et al. (2001) rests on the potentially radical alterations in research practice brought about by making 'society' a reference point ('society talks back').

[6] Ezrahi embeds the distinction between knowledge and information in a larger frame that involves wisdom (characteristically polysemous) by contrast with knowledge (entailing method or organisation) and information (more socially transportable than knowledge), and then outformations (imagistic communications whose creative impact may come through aesthetics or fiction). Knowledge in the sense of cognisance or awareness, a sense that informs the concept of knowledge as an organised body of information, also has the connotation of information processed by persons, an aspect I emphasise later.

[7] Its twin, 'transferable skills,' is especially important within the UK university system as a defence for non-vocational subjects and subjects that appear to have no direct relevance to national economic goals. The claim is that students are being equipped with skills that

they can deploy in other or novel contexts, indeed that this indirect training makes them more adaptable, not less, to a changing world (see Barnett, 2000).

8 This is the logic. As things turn out, it may well be that 'users' are co-created – taught what they want – alongside the research (see Woolgar, 2004, pp. 457–8).

9 This is a radical turn away from the ethos of the research university, as the primary producer of science, in the first half of the twentieth century when the independence of the university system was useful to government and commerce alike. Its role, to validate the autonomy of scientific facts, then found a social form in the autonomous community of scholars, among whom it was inappropriate to identify one's creations as property.

10 Mediator more in the sense of translator than 'intermediary' (go-between, like the academic who typed Barat's letter). I am grateful to Professor Viana Vargas, UFMG, Brazil, for this clarification.

11 After Fuller (2003), who refers to the 'demonstrative' aspects of knowledge, which Corsín Jiménez glosses as 'the dimension of production through which knowledge creates its own aesthetic effects' (2008, p. 233).

12 This has since solidified into a scheme to be piloted in 2011: 'We are all aware of the increasing imperatives to demonstrate clearly the way our [national] investments in research benefit society and the economy … We want to work with the research community to tell the story of its success' (*Times Higher Education*, 4 February 2010).

13 To repeat, if 'external' circulation counts but 'internal' does not, who marks the boundary?

14 At the same time, people also take great care in remembering who told them what and thus the relationship that led to their own knowledge.   In addition (see n. 2), there is the specific role of payment in transfers of ritual practices, magic, song and so forth; these performances are owned to the extent that payment can be anticipated.

15 My thanks to Ash Amin for drawing this work to my attention.

16 'Not including in one's accounting the effects produced by one's activities on other agents is the origin of the overflow called externality' (Callon et al., 2009, p. 235, emphasis removed).

17 '[H]ybrid forums take part in a challenge […] to the two great typical divisions of our Western societies: the division that separates specialists and laypersons and the division that distances ordinary citizens from their institutional representatives' (Callon et al., 2009, p. 35). Hybrid forums become occasions 'in which the direction given to research and the modes of application of its results are discussed, uncertainties predominate, and everyone contributes information and knowledge that enrich the discussion' (p. 9). Forums because they are open spaces for discussion, hybrid because the groups involved will include politicians, technicians, laypersons and so forth.

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