

The Furnace of Instrumental Reason



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We only have to look around us, at the blunt use of metrics such as journal impact factors, h-indices and grant income targets to be reminded of the pitfalls. Some of the most precious qualities of academic culture resist simple quantification, and individual indicators can struggle to do justice to the richness and plurality of our research. Too often, poorly designed evaluation criteria are “dominating minds, distorting behaviour and determining careers.” (Lawrence, P.A. (2007) The mismeasurement of science, Current Biology 17. 15, pp. 583–585.) At their worst, metrics can contribute to what Rowan Williams, the former Archbishop of Canterbury, calls a “new barbarity” in our universities.

Wilsdon et al. (2015, Foreword, p. 3)

Introduction

I take for granted in this paper that the broad answer to our questions concerning the relation between funding and research is that it is, increasingly, the funding and the search for it – for ‘grant capture’ as the phrase has it – that drive both the kind of research that is done in universities and the way it is done. Many examples could be given, and I touched on several in a previous paper for this seminar, ‘Mud and hair: an essay on the conditions of educational research’ (Smith 2014a, b) and in the paper that Jim Conroy and I gave in Leuven last year on ‘The ethics of the research excellence framework’. In the first paper I noted the speed with which ‘sponsorism’

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has established itself in academic culture in the UK. I quoted MacFarland (2012) for a definition: 'sponsorism is when someone's research is designed to fit the agenda of funding bodies', and I suggested that the older idea, that an interesting – even theoretically interesting – research question might precede not simply the quest for funding but the very consideration of whether funding would be helpful in any particular case, had come to seem naïve, or even laughably old-fashioned. Certainly colleagues in my own university now take it for granted that, despite what the advertised criteria say – these in any case tend to ambiguity – unless they establish themselves as successful 'grant-capturers' they will have no chance of passing probation or achieving promotion. In a remarkable conflation of these two career hurdles some UK universities are now moving from a three-year to a five-year probationary period, by the end of which the lecturer will either meet the criteria for promotion to Senior Lecturer or be required to leave. There is uncertainty over whether meeting the criteria for promotion will automatically lead to actual promotion. What seems clear is that the increased height of the hurdle will be reflected in ever greater expectations of 'grant capture'.

In the second paper, 'The ethics of the research excellence framework' (now published as Conroy and Smith 2017), Jim Conroy and I drew attention to the criterion of 'Impact' in the regular (once every 7 years) evaluation of academic research in the UK. Every department of the university, from Material Physics to Theology, must submit case-studies showing how its research benefits the wider, ie non-academic, community. For the Material Physicist this might mean working with industry to develop more effective lubricants for artificial hip-joints (a real and of course wholly admirable example). The collaboration can be written up in ways that emphasise both the contribution of the hip-joint manufacturer (which counts as grant-capture for the university) and the wider (that is, more than academic) value of the research to the community. The patients are happier and in less pain; the hip-joints are more effective and last longer, so the benefits can be readily expressed in economic terms too. This is an excellent example of Impact, properly capitalised in REF terms. Theology may seem at a disadvantage here, but it can join in the game by contributing to a multi-faith festival that it organises with the City Council. There will be economic benefits from sales of samosas and chapatis, and even more so from the calculated Social Return from the festival: the enhanced social cohesion that means less racially-motivated crime and thus less demand on the Police, hospital services, magistrates and prison professionals. There will be less anxiety or depression and so there will be fewer days off work, to the further benefit of the local economy. I return to 'Social Return' below.

At least the REF rewards, in theory, good academic work rather than the indifferent 'capture' of funding. Impact case studies carry implications for the number of academics whose publications can be submitted for assessment – roughly ten for every case study – and it is here that the essentially academic criteria apply. Publications are judged on academic originality, rigour and significance: the latter meaning significance to the academic community and in no way to be equated with impact, capitalised or otherwise. A top-rated, 4* publication currently brings in (in

Education) £8337 in each year of the seven-year cycle, ie over £58k in total.¹ This money, unlike so much funding from other sources, does not then leave the university to be shared with industrial or commercial partners, since its academic component is an achievement of the university alone. It does not arrive already ear-marked for redistribution in the way that many if not most external grants do, for instance to pay the salary of a research assistant. The interesting question then is this: why, given the significant income achieved by good publications (and publications accounted for 65% of a department's submission to the last REF in 2014) – do universities set such store by capturing all and every kind of external funding, especially funding that does not carry the academic prestige of REF funding, funding much of which is destined to leave the university almost as soon as it reaches it, and funding the search for which seems bound to distract academics from writing the books and journal articles which constitute their traditional work and which in any case bring a substantial flow of income to the university? Before attempting to answer this question I quote a similar cry of exasperation from Stefan Collini's luminous book, *What are Universities For?* (2012), and then turn to a case-study of the new insanity.

To meeting of Faculty Board where we are told that the university wants us to 'generate' more 'research income'. Successfully control my temper and express judicious-sounding reservation. But really! High-quality research in my field depends, overwhelmingly, on having time free from other distractions ... Regular sabbatical leave is the key, understood not as a period in which you 'complete' a 'project' but as a space in which you start to ruminate about an unobvious question and find out whether you might, one day, have something interesting to say about it. The origin and purpose of grants and other kinds of 'outside income' is to pay for expenses incurred in carrying out such a piece of research, so being told to *pursue* 'outside funding' amounts to the instruction: 'You must find extra ways to incur expenses'. More material for the growing field of tail/dog wag-relation studies. (p. 151).

I return to the significant matter of 'rumination' in the final section below.

Raising the Bar

Here is an example of the requirement for 'grant capture' that vividly illustrates Collini's point. In the summer of 2015 the UK's Newcastle University introduced a new performance management programme called 'Raising the Bar'. All active researchers were given 'minimum expectations for research performance'. This was in response to concerns that the University was slipping down the rankings of Russell Group universities (a self-selecting group of the larger, older and more research-intensive universities that lobbies for its own interests rather than those of the Higher Education sector more widely) and that it was not well positioned to

¹These are the figures for my own university at least.

meet the challenge of the next REF.² The ‘minimum expectations’ entailed individual targets for external research funding, set according to academic subject and individual seniority. Thus a lecturer in the humanities might be expected to secure £3k each year, while a professor or senior lecturer in the same discipline might have a target of £12k; a professor or senior lecturer in a science- or social science-based discipline might have a target of £45k per year. At the same time researchers were expected to produce highly rated publications for the next REF: at least four 3* publications (or ‘outputs’ as they are of course called) in the case of lecturers and significantly more highly rated publications in the case of promoted staff. 3* is awarded to publications that display ‘Quality that is internationally excellent in terms of originality, significance and rigour but which falls short of the highest standards of excellence’, in the terminology of the REF.

At Warwick University in the previous year associate professors, readers and professors in the university’s medical school were told in late 2014 that research-active staff who had not brought in an average of £90,000 per year as principal investigators (or £150,000 as co-investigators) over the past 4 years were at risk of redundancy. Those opposed to the redundancies were quick to complain that academics were being put in a similar position to ‘market traders in the City, who are judged solely on the amount of money they raise’ (Jump 2014). They noted that financial targets such as these carry the temptation for academics desperate not to lose their jobs to ‘massage data’ (which of course has indeed been prevalent in the financial industries). In an echo of Collini’s critical remarks above Dennis Leech, president of Warwick’s branch of the UCU, pointed out that the financial targets amounted to an encouragement, if not a directive, to academics to ‘carry out the most expensive research they could’ Jump, *ibid.* he suggested that this was unacceptable behaviour on the part of an institution funded largely by public taxes. These are just two examples of the performance management strategies now being adopted by at least one in six UK universities (*Times Higher Education* 7 Dec 2015) and of the criticisms made of them.

If we draw these criticisms together it is difficult not to conclude that performance management such as this does not make sense even in its own dismal terms. Academics are driven to chase paltry sums of money – as little as £3k per year in the case of a humanities lecturer at Newcastle – when even the financial return, let alone the academic prestige, from publishing a very good (of better than ‘international excellence’, but let this oddity pass) journal article or book can be twice as much as this. In any case the funding opportunities for, say, a historian or a philosopher are quite limited compared to those for a Material Physicist or a specialist in sustainable technology. The success rate for applications to the various UK funding councils is seldom much more than 35%; in 2015–16 for the Economic and Social Research Council it was 12%. The opportunity cost – the amount of time wasted in chasing

²It is worth noting that neither at the time when ‘Raising the Bar’ was proposed, nor at the time of my writing this paper, was there any clear indication of what the requirements of the next REF will be, nor exactly when it will be, nor whether even the title will be the same. All agree however that whatever it is, it will happen.

funding from these sources – is obvious: time that could have been spent in doing research (not to mention teaching, of course). The low success rates for the Funding Councils in turn are partly responsible for the pressure to acquire funding from any and every source; but much the same opportunity costs apply everywhere, and success in ‘grant capture’ does not carry the same prestige in all cases (the LEGO Foundation is often cited, no doubt unfairly).

In trying to make sense of this phenomenon the comparison with an episode of Chinese history is irresistible. During Mao Zedong’s ‘Great Leap Forward’ in 1958 every local commune was required to set up small backyard furnaces to produce steel from scrap metal, to fulfil Mao’s ambition to match the steel production of the USA and the other western powers. Farmers, doctors, teachers and others were forced to turn to this task from their regular work. Farm workers left their fields in search of such stray bits of metal – rusted iron bolts or broken metal tools – as they could find, and agriculture suffered. In their desperation to meet the production targets set for them peasants sometimes threw their pots and pans, their only means of cooking, into the furnaces. The environment was despoiled as whole forests were cut down to fuel the furnaces. Jung Chang records how during this time she went out to gather what the peasants called ‘feather fuel’, the scrub and twigs that were in fact virtually useless, burning up in no time at all, but were the only approximation to fuel that could be found.

Once I voiced my regret about the lack of proper trees. The women with me said it had not always been like this. Before the Great Leap Forward, they told me, the hills had been covered with pine, eucalyptus and cypress. They had all been felled to feed the ‘backyard furnaces’ to produce steel ... I was shocked to come face-to-face, for the first time, with the disastrous consequences of the Great Leap, which I had known only as a ‘glorious success’. (Jung Chang 1993, p. 555)

Despite these efforts the furnaces did not produce steel anyway, only low-grade and largely useless pig iron. Metallurgists could have told Mao that this would happen, but he persisted with the scheme in the face of such evidence as people dared to bring to him since it was rooted in the revolutionary zeal of the people rather than the expertise of ‘intellectuals’ (‘experts’, we might say, in resonance with today) and scientists.

The comparison between Raising the Bar and the backyard furnaces is of course less than perfect. It does however highlight the absurdity of scratting around for insignificant sums of money down the back of the academic sofa (the equivalent of the backyard furnaces) to the neglect of more important academic goals (the equivalent of advanced methods of steel production). Furthermore the destruction of the natural environment to feed the furnaces parallels only too well the effect on what Wilsdon, in the quotation that prefixes this paper, calls ‘the most precious qualities of academic culture’ and ‘the richness and plurality of our research’. It sidelines cooperation and mutual support in favour of increasingly desperate competition; it puts what can be measured in terms of money ‘captured’ before consideration of what we value; in the field of education especially it threatens to marginalise all other forms of research, particularly those that, in Collini’s words above, call us to ‘ruminate about an unobvious question and find out whether [we]

have something interesting to say about it' – and this despite the fact that, in the UK, the REF explicitly welcomes and rewards research of this kind.³ Most of all, however, the comparison with the bizarre and tragic backyard furnaces helps us to see the full ludicrousness of what is thus satirised.

Newcastle University's 'Raising the Bar' performance management programme was withdrawn in the summer of 2016 after trade union 'action short of a strike' that involved refusal to mark essays and examination scripts, a sanction that would have prevented students from graduating and entering the world of work. The University and Colleges Union and Newcastle University's management issued a joint agreement (Newcastle UCU 2016) recognising that, among other things,

- performing well in key metric exercises such as the REF is important even if some of the rules are problematic
- it is problematic to focus exclusively on quantitative targets
- it is necessary to continue to improve the research performance of the University
- we need to establish a non-coercive culture and approach

It is hard not to wonder, though, if the use of bullet-points is not itself a symbolic concession to management.

Instrumental Reason

Since 'grant capture' is deeply irrational, in deflecting academics from their proper and in all senses more profitable work, it is tempting to wonder if it is a symptom of a more pervasive underlying condition. In an interesting blog on the Raising the Bar affair Liz Morrish (2015) writes that it is a symptom of the audit culture and its 'rituals of verification' (Power 1997) that demand constant and obsessive monitoring, reporting and surveillance. Since, as she points out, the REF scores of individuals are confidential to the REF Panel that awarded them, they are not available to the university's management – its monitors and auditors – who accordingly look for something which they *can* measure. This seems right, though I would put it slightly differently: audit and verification are means of holding people to account, and from holding people to account it is a small step to the urge to discipline, to apportion blame and exact penalties. One does not have to be a Foucauldian to make this diagnosis. Those conducting regimes of performance management need to show that they can 'make hard decisions' if they are to rise to the next tier of management, where they will be able to exercise their powers not merely on individuals but on whole Departments and Schools.

³E.g. 'Although modest in volume, the quality of philosophical outputs was generally very high. World-leading conceptual work addressed and illuminated complex educational issues and contributed to the refinement of theoretical understanding' (Overview report by REF Main Panel C and Sub-panels 16 to 26, HEFCE 2015, p. 108).

Although talk of symptoms is apposite here, perhaps it is more revealing to think in terms of symbols. In any case there are connections between the two terms in the context of the discussion here: a symptom becomes a symbol when it kicks free of the condition that originally underlay it, and takes on a life of its own. Thus the backyard furnaces were a symptom of the way Mao's judgement was impaired by his desire to catch up with the west in steel production, and by his urge to inspire and benefit from the revolutionary fervour of the people. The furnaces then became a symbol to the rest of the world of that fervour and of China's technological progress. As a symbol their failure was intolerable, with the result that the backyard furnaces movement continued despite clear evidence that it was a disaster. Similarly, in the Newcastle case, while grant capture started as a symptom of the culture of audit and heavy-handed performance management it became emblematic of the University's attempt to rise in the Russell Group of universities and display its REF-ready muscles to its competitors. It thus symbolised the essentially instrumental nature of the modern university, whose success is measured by the extent to which it meets the ends of climbing in the various league-tables and improving its scores in exercises of research assessment. What we might call the intrinsic value of the university, or the value of the university when it is true to its intrinsic ends and purposes, has disappeared entirely.

The instrumental thinking that now characterises the universities of the UK can be illustrated in numerous ways. Above all, the charging of undergraduate fees of £9k per year, to be repaid when the graduate's annual salary reaches a certain threshold, naturally causes university students to think that the principal function of university education is to enable them to earn sufficient money, in graduate-level careers, to repay the debts they have incurred. The whole business is thus circular – the outcome of university study is income – though presumably the sterility of this is satisfying to a particular kind of mind. Universities are finding other ways too of concentrating the student mind according to the tenets of instrumental thinking. Some appoint 'academic advisors' from the ranks of lecturers: their job is to conduct a 'skills audit' of their incoming first-year students and suggest ways in which they can improve their CVs during their time at university in the interests of securing good employment when they leave. If they show no evidence of 'leadership skills', for example, perhaps they could found a new university club or society. Other universities are moving to include modules on Entrepreneurship in every degree programme. In one university (not my own) it was only at a late stage that the thought occurred to the proposers of this scheme that it would require the services of a vast number of lecturers competent to teach such modules, of which they could identify only two, from the Business School. There was also the wider problem that very few academics, having spent all or most of their career in universities, had the knowledge of the world of graduate employment that these innovations seem to require. In particular there was no reason to suppose that they had more idea than anyone else in just what fields the jobs of the future would be found.

Should the enthusiasm of academics for this new Idea of the University falter, measures will be taken to re-inspire them. A new Excellence Framework, this time the TEF or Teaching Excellence Framework, proposes ways of rewarding good

quality university teaching. A major criterion of this will be the proportion of a department's ex-students who are in good graduate-level jobs 6 months after graduation. To be clear: if the proportion of your ex-students is not up to scratch, this shows that you did not teach them well, and appropriate sanctions will apply. Collini (2016) notes in his analysis of the Green Paper that proposes the TEF that the phrase 'value for money' occurs four times in the one-page foreword to the Paper, 'and it is repeated over and over again in the body of the document (the NUS [National Union of Students] counted 27 appearances, topped only by 35 for 'what employers want')'. Collini reasonably identifies this as an expression of 'consumerist logic', but it is of course before anything else an expression of instrumental reason. The purpose of university is to give its customers value for money and meet the demands of employers. The TEF Green Paper, *Fulfilling Our Potential: Teaching Excellence, Social Mobility and Student Choice* (2015), was published by the Department for Business, Innovation and Skills (BIS), which was at that time responsible for universities, in the clearest possible indication of the instrumental direction of Government policy on higher education. (It is now the responsibility of the Minister of State for Universities and Science, an individual who appears to be located in both the Department for and the Department for Business, Energy & Industrial Strategy, the latter being the successor to BIS. The significance, if any, of these latest semantic shifts currently eludes me.)

Education is naturally not the only field of activity on which the cold hand of instrumental reason has settled. My favourite examples, which I have cited elsewhere (2014), come first from the resignation of the President of the Royal British Legion (which 'provides help and welfare to the serving and ex-Service community and their families') after he was found to have described the annual events to commemorate those killed in war, such as the ceremony at the Cenotaph in London's Whitehall, as a 'tremendous networking opportunity' in which he could help defence companies (that is, arms manufacturers) lobby ministers and senior members in the armed services (*The Guardian* 15 Oct 2013). Secondly, the then mayor of London, Boris Johnson, welcomed the London Olympics as a 'gigantic schmooze-athon', the opportunity to show the world the 'wealth of ... amazing investment opportunities' in Britain. The website of the government's department of Business, Industry and skills (BIS) where this appeared without apparent embarrassment or shame quoted other politicians from the Coalition government, such as the Business Secretary, Vince Cable, to the same effect (though they did not use the term 'schmooze-athon'). Thus sport, which might have appeared something of intrinsic value, joins the list of human goods that are now instrumentalised for the benefit of the economy. In a coda to this it is worth mentioning that Great Britain's impressive achievements in the 2016 Rio Olympics now appear largely the result of careful investment in those disciplines, such as cycling, where large numbers of medals stood to be gained because of the plethora of events.

Some of the most remarkable examples of the instrumentalisation of things once regarded as good in themselves come from museums and similar venues. In an editorial to a special issue, *The health and well-being potential of museums and art galleries*, of the journal *Arts & Health*, the editors write that 'In recent years, many museums,

including art galleries, have broadened their services to include those directed towards improving health and well-being' (Chatterjee and Camic 2015). Beneficiaries include 'older adults, people with dementia and mental health service users'. They continue:

Evidence shows that engaging with museums provides: positive social experiences, leading to reduced social isolation; opportunities for learning and acquiring news [sic] skills; calming experiences, leading to decreased anxiety; increased positive emotions, such as optimism, hope and enjoyment; increased self-esteem and sense of identity; increased inspiration and opportunities for meaning making; positive distraction from clinical environments, including hospitals and care homes; and increased communication among families, caregivers and health professional [sic].

The editors admit that 'robust studies regarding the efficacy of museum encounters are limited', but they continue: 'Notwithstanding this shortfall, when analysed and valued in a multi-dimensional, multi-attribute and multi-value socio-economic environment, cultural heritage is widely accepted as an important facet of society in providing cultural references for populations and local communities' and also, of course, and inevitably, 'as an economic asset that provides jobs through tourism'. So the lack of good evidence for these implausible claims can apparently be discounted if they are 'analysed and valued in a multi-dimensional, multi-attribute and multi-value socio-economic environment' (ibid.). The language here does not yield its meaning readily. Certainly the 'socio-economic environment here is not 'multi-value': it is an instrumental monoculture (Smith 2014b), the worthwhileness of museums and art galleries lying in health benefits, broadly understood, whose worth in turn will be articulated in fewer claims on expensive medical and welfare facilities. The length of the editorial, just under a page and a half, is exceeded by the list of references, as if to compensate for the paucity of 'robust studies regarding the efficacy of museum encounters', that is, for lack of evidence.

The novelist Jonathan Coe nicely parodies claims such as these in his recent novel, *Number 11* (Coe 2015: the title reflects the way that power in the UK has moved from 10 Downing Street, the residence of the Prime Minister, to 11 Downing Street, the residence of the Chancellor of the Exchequer). Here is an 'academic expert' talking on television about a site in London where construction workers have found twenty-five skeletons in what seems to have been a burial ground for victims of the Black Death. The interviewer asks:

'So, Professor Harvey ... you think that this discovery may not just be of historical value, but worth something in monetary terms as well?'

'Yes', said Laura. 'Of course I'm not talking about the market value of the remains if people were to try and sell them. I'm saying that discoveries like this add to the sense of mystery which attaches to parts of London, and that sense of mystery is one of the things that attracts people here.'

'Tourists, you mean'.

'Yes'.

'And you're part of a movement, I believe, which is tasked with the job of assigning value to phenomena such as this?'

'That's right. As members of the Institute for Quality Valuation, we attempt to quantify things that have traditionally been thought of as unquantifiable. Feelings, in other words. A sense of awe, a sense of wonder...' (pp. 258–9).

Laura has written a book, *Monetizing Wonder*. Elsewhere in the novel a character is charged with placing a monetary value on the Loch Ness Monster – that is, on the myths and legends that surround this almost certainly non-existent creature.

Intrinsic Value

This paper so far may seem only to confirm John Dewey's well-known warning about 'the vice of externally imposed ends' in education (Dewey 1916), or to recommend Michael Oakeshott's equally celebrated idea of education as a 'place apart' from the immediate, local world of the 'present and the particular', seen as a site of corruption, servitude and, in the terms of this paper, the narrowness of instrumental reason (Oakeshott 1971). For Oakeshott the assumption of instrumentalism is foremost among the perils that education is to release students from: education does not exist to tell them in so many words that instrumental reason is the only grown-up way of thinking. But this interpretation is too close to the view that education which cannot be thought of as having intrinsic value is really not education at all. On the contrary, education has all kinds of extrinsic purposes, including qualification for a job or career; it may be thought of as rendering a nation-state more civilised and cohesive, as standing to increase its GDP, and so on. I intend little more here by resurrecting the question of its intrinsic value than to argue, or perhaps merely to suggest, that it cannot be reduced exhaustively to those extrinsic aims and purposes, and to return to the old, and now widely abandoned, question of how the claim that there is an intrinsic dimension to the value of education might be justified. There is moreover an important rhetorical or political side to this. When we are asked what are the purposes of education, how can we expect people to respond other than with bewilderment (if not cynicism) if we appear to shrug our shoulders and merely insist that education has no external goods or purposes but it good in and for itself alone?

The form of the difficulty here is one that we should be familiar with, for it appears in the first Book of Plato's *Republic*, at the beginning, and not by accident, of what is generally thought of as western philosophy. As Socrates encounter the difficult in the *Republic* it concerns the nature of *dikaiosunē*, often translated as 'justice' but which bears the wider sense of 'doing what is right'. The question is how we are to understand the value of *dikaiosunē* in itself, apart from its consequences such as good reputation and honour: for if we value it for the sake of these things then we are not valuing doing right in itself. In the first pages of the *Republic* a rich, immigrant business man (with more than a touch of the *mafioso* about him) called Cephalus, who has sent for Socrates to provide some philosophical entertainment, is alarmed to find that his own suggestion, that doing right brings its proper reward in the satisfactions of not having to lie and being able to pay off one's debts, is disputed by Socrates (partly on the grounds that it is not right to return the axe you have borrowed from your neighbour if he has gone mad in the meantime). Cephalus suddenly remembers he has to go and attend to the business of a religious sacrifice,

and leaves his son, Polemarchus, to take his place in the discussion. The other interlocutors seem to grasp that some special kind of answer, beyond listing the contingent rewards that doing right may bring, is required. Thrasymachus, in his characteristically forthright way, demands that Socrates supply a definition of *dikaïosunē*: one that is ‘clear and precise’ (336d).⁴ When this demand is not met he withdraws from the discussion. Glaucon offers a barely more sophisticated version of the same demand: ‘I want to be told what exactly each of them [doing right and doing wrong: *dikaïosunē* and its opposite] is and what effects it has as such [*auto kath’auto*] on the mind of its possessor, leaving aside any question of rewards or consequences’ (358b).

There are at least three interesting things to note here. The first is that both Thrasymachus and Glaucon both think it reasonable to demand a ‘precise’ or ‘exact’ answer. Such an answer would presumably have to be quantified and unconditional, as if doing right consisted in absolute adherence to a number of moral principles, or as if, in the museums example above, so many hours spent in a museum or art gallery – and spent in a particular and specifiable way – could be shown not merely to correlate with but unequivocally to cause decreased anxiety, precisely measured by lower blood pressure or a slower heart beat. An answer like this, of course, is (precisely, as we say) the kind of instrumental justification of doing right that both Thrasymachus and Glaucon are asking Socrates not to offer, and it is difficult to imagine a ‘precise’ and ‘exact’ answer that does not take this form. The second thing to note is that it will also be a brisk or quick answer: ‘causes a reduction in blood pressure to 120 over 80’ (with appropriate caveats) is the end of the matter, leaving little room for further thought or discussion. This is as far as could be imagined from Collini’s vision of research (above) as finding ‘a space in which you start to ruminate about an unobvious question and find out whether you might, one day, have something interesting to say about it’. We should register, and enjoy, the temporal implications of ‘start’, ‘ruminate’, ‘might’ and ‘one day’.

The third thing to note is the epistemological dimension of what is at stake here. We are enquiring about what counts as a sound reason for valuing justice, or a museum, or education – or, to put it differently, what justifies us in saying that we *know* that these things are valuable and worthwhile. The demand for precision and exactness of course takes us in a scientific or mathematical direction, to measuring the blood-pressure of museum-goers or to examining large data-sets and concluding that the education system of Singapore is better than the one in England. In short, it is the nature of evidence that is at issue here, and our deep tendency to be held captive, as Wittgenstein put it (1972 § 115), by the picture of science which convinces us that ‘scientific’ evidence trumps all other kinds.

Here, by contrast, is the journalist and cultural critic Stuart Maconie paying testimony to the educational value of art history, a subject shortly to be cut from the English curriculum as an A-level subject, that is, one that is taken mainly by senior pupils in secondary schools:

⁴All translations are from Lee (1974).

My other A-level ... was art history, and almost every moment of it, every darkened afternoon with Keith Spruce, 'Bri' Lewis and Dorothy Taylor chatting informally but authoritatively at the slide machine, looking at Fra Filippo Lippi or Degas or Kandinsky or Mondrian, has stayed with me. Those long, absorbing hours taught me that the creation, appreciation and love of art is not just the mark of any civilised society, it is the clearest mirror you can hold up to that society, telling you more of its time than a thousand academic histories or earnest documentaries. (Maconie 2016)

Many examples of such testimony could be quoted: of how people have found their education expanded their mind, taught them to think 'outside the box', broadened their horizons, revealed to them a world of wider meanings than they could ever have imagined, showed them not simply how to achieve their ambitions and desires but how they might revise their desires and set their ambitions differently. Why should we not say that such testimonies are the best evidence we have for the intrinsic value of education, in a way that the brisk listing and quantifying of its goods ('Graduates earn on average £100k more than non-graduates over a lifetime') could not possibly do? In his later work Wittgenstein, freeing himself at last from the scientific picture that had held him captive, came to recommend the idea of 'imponderable evidence' (1972 p. 228): that is, evidence that cannot be precisely calculated, weighed and measured, but which is good evidence nonetheless. He wrote (*ibid.*): 'Imponderable evidence includes subtleties of glance, of gesture, of tone ... I may recognize a genuine loving look, distinguish it from a pretended one...'. If subtleties of glance or tone can tell us when someone is lying and when they are telling the truth, our faculties should be reliable enough for us to be able in general, if never with the degree of certainty we expect from the mathematician and the engineer, to recognise sound testimony and distinguish it from false.

It is no accident, I wrote above, that the question of intrinsic value stands, in the *Republic*, at the beginning of western philosophy, for Socrates (or Plato: the usual caveats apply concerning how far we can separate the two) knows that we have here no ordinary question, as if it was like asking whether we should take a taxi or catch the bus, but what we would now call a ruminative question, to use Collini's word, or a philosophical one. Part of the great power of Socrates' insight, though, is that this is not the quick way to a solution – as if having identified the problem as a philosophical one we would then know what methods or techniques we would need to employ – but only the beginning of a deeper and more interesting problem. All Socrates knows for sure, or we might say feels in his bones, is what is the wrong way to talk about the intrinsic value of *dikaiosunē*, which is to appeal to its contingent rewards and consequences. (And as we have seen he has some success in convincing Thrasymachus and Glaucon of this.) In the same way he knows that Theaetetus, in the dialogue that bears his name, must be disabused of the idea that it is possible to think about the nature of knowledge as if it was like geometry, a task consisting of clear, sequential steps following from basic axioms; just as he knows that Euthyphro, in his dialogue, will never be able to think sensitively about morality while he identifies moral thinking with having unshakeable convictions about what is and is not the will of the gods.

Thus in trying to answer the question ‘what is knowledge?’ Theaetetus has to make the move from addressing that question directly, as if it might be solved by taking up this answer or that – he accepts every one of Socrates’ proposed answers in turn until Socrates himself exposes their limitations – and to think about the kind of thinking that investigating the nature of knowledge requires. He needs, we might say too easily, to think philosophically: too easily, because while Plato (rather than Socrates here) has shown the power of such thinking he has also succeeded in problematizing it: for example by making no great distinction between the ‘philosophical arguments’ of the *Republic* and the speculative or mythical elements in the last Book (such as the myth of Er); by putting into Socrates’ mouth specious arguments and word-play (e.g. 376a–c: dogs have a ‘truly philosophic nature’); by arguing for the superiority of speech over writing in the *Phaedrus* while producing an extensive *dikaiosunē* body of texts. Nor should we forget here the questionable analogy between *dikaiosunē* in the soul of the individual and in the city-state, on which most of the *Republic* rests.

Socrates, we might say, slows us down in our attempts to answer certain sorts of question not only by insisting that we need to learn a new way of thinking about the question and its epistemological presuppositions, a way that we might characterise as philosophical or ruminative: he slows us down further by reminding us frequently that this philosophical or ruminative thinking is no straightforward matter, but slips between our fingers just as we think we have grasped it, or has the disconcerting tendency from time to time to turn into the faulty or clumsy thinking for which we imagined it was the cure. There is in this sense no quick answer, of course, and philosophers might do more to keep this point in view in the various forums and occasions when they are called on for the kind of brisk answer that the world regards as the standard sort of response. ‘This is not a question that can be answered quickly’ is not a bad start, especially if it can be pursued a little further. This paper has ruminated about the kind of longer answer that might be developed. Shorter and catchier answers, in the spirit of instrumental thinkers of our time and all times, simply feed the furnace whose product is dross.

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