Professor Steve Fuller Afternoon Seminar

- Conceptualisation of knowledge:

Military / industrial metaphor

- Military seeks goals/truths
- Industrial believes that one can never put too much effort into research; there can never be enough knowledge; constantly produce – a productionist notion – no goal, just belief that ‘more is better’.
- Unification of knowledge.
- Fewest principles for coming up with many phenomena.
- Metric orientation justification comes from ‘leftists’.
- Aristotle said we can only measure what is measurable. How does one measure ideas? How does one work out what needs to be measured?
- Justification of waste as component of knowledge production.
- Problems of measuring quality.
- No investment in longer term knowledge production.

Discussant: Sara Delamont

I think there are some interesting lessons for educational research which we might want to be thinking about. I’m absolutely convinced that people in educational research know something about some of the work that is being done. If we don’t think of it as a sociology of science but think of it as a sociology of knowledge there are some big issues in that literature which have important lessons. I remember being terribly shocked almost thirty years ago when I discovered some very distinguished professors of science of education had never heard of Thomas Kuhn and they were unabashed that they didn’t. Let’s bracket away for a minute from the audit culture and whether we ought to be in the current RAES and that kind, but as long as we are in one there is no doubt that some disciplines suffer
because they are too hypercritical. If we stick to the social sciences for a minute, if we look at ESRC grant getting, ESRC student recognition exercises and RAE panels, there are one or two very self confident social scientists in Britain. You could see it in the first round of teaching quality audit and the second round within numerical scores. I’m going to take two examples, economics and anthropology. If you look at those two disciplines, they have no doubt at all that their colleagues, their discipline (even though they fight like cats in a sack – economists have ferocious disputes with each other and anthropology is notorious as a discipline which is riven with ferocious disputes) but when they are forced to make judgements about their field which have consequences outside their field they close ranks. If you look at any of those things – ESRC grants, Student Recognition, Teaching and Quality Audits, RAE, they face the outside world saying the work in Britain is world class. So if for instance you go back to the very first Teaching and Quality Audit when anthropology was in the first round, in England there were thirteen anthropology departments at that time, eleven of them claimed excellence and all eleven that got inspected were given excellence. Did Education do it like that? Did Sociology? I work in two Departments that potentially shoot themselves in the foot. You look at ESRC grant applications – economics and anthropology – they routinely give all their grant applications alpha plus to get their share of the cake for their discipline. Look at their recognition for studentships, so everywhere gets studentships. Look at the RAE panel. No wit may be in some objective world that economics and anthropology are more world class but I don’t think that’s what’s going on. I think sociology and education do themselves down by being too self critical and picky and we don’t get the funding. I don’t think anyone should be turned down, unless you really, really think they shouldn’t do a PhD. I do think we ought to be using and thinking about some of these long term dynamics that Steve has been spelling out to us to think are we when we are doing a peer review defending the discipline or are we actually shooting ourselves in the foot. And I do think knowledge is power and do think we need an understanding of how some of these things work. There is a lot of interesting work in sociology of knowledge. Science has had a sociology of science and technology study done for fifty years and a lot that is glossed under, but actually a lot is how knowledge works and moves and so on and there are lessons to be learned.

I loved Steven’s story of the journal where they were all being told to put more citations in to raise the impact factor. There is one educational journal and I certainly remember the publishers (not the editors) who said could we possibly do that. The publishers encouraged all authors when they were doing their revisions to up their number of citations because that would get a better chance of getting that journal up the impact table. You may deplore that, but if that’s the game that’s out there, perhaps we ought to be patriotically British to push our journals up the impact table. We are a small country maybe we should be trying to push our journals up.
There is an issue, I do think, with an RAE coming up, we do need to recognise recognising our discipline. It is no secret, but we were told at a panel meeting [for sociology] that we had to be very careful not to be so self critical that we would damage the discipline. I think education’s got it worse.

I’m going to take a couple of examples from New Zealand’s equivalent of the RAE, the PBRS. They had their first one and they are just doing their second at the moment. The first one was catastrophic for educational research – in the forty disciplines that were included, education came next to bottom, only nursing was below it. One of the things that led to was a horrendous soul searching in the educational research community in New Zealand. One of the things that came out of that was an interesting journal article by the panel members led by John Hattie, who has an interesting position in as much as he was Dean at Auckland, but having taught in Canada, Britain and the US he brought a bigger picture than some New Zealand educational researchers had. The analysis that John and his colleagues published was very interesting because a lot of it consisted of saying that education had done very badly because it had shot itself in the foot. For example, in that PBRS, it had a category for annotating your choice of publications. You chose four publications to be considered, but then there was a drop down box where you would put up to fifteen lines of why you chose those publications. Education overwhelmingly never filled in that box. So the panel was faced with people who had submitted publications that the panel knew were not their best publications but with no idea why they picked the things they had. Absolutely classic shoot yourself in the foot. As a discipline, nobody got themselves organised to take advantage of the things they already had. So a) people were choosing the wrong things and b) they were not explaining why they had chosen them.

John Hattie told me that he was prepared to visit every place in New Zealand to give a briefing session before the first one but most places didn’t even take up the invitation. It turned out afterwards that hordes of people in New Zealand didn’t know anything about citation index, they didn’t know the relative rating given by a panel – they put the thing they were proudest of – which is sweet and adorable but doesn’t bring funding to education departments.

The net result was that educational research in New Zealand got criticised for coming next to bottom (somebody had to be bottom) and clearly education was feeling pretty bruised and damaged out that was party because they didn’t use the knowledge that was out there. One of the things that I think is important is that we arm ourselves with some of the knowledge from the field that Steven is from and some of those big issues, because there are real implications from that.

I do have a problem with all the metrics based citations because of a biggish body of literature that show citation indexes are very gendered and the work of women is not cited. Women cite equally, men don’t cite women’s work and that is why I get bothered by metrics because it is not a level
playing field. Speaking purely as annoying, stroppy woman, women’s work becomes very quickly invisible and I’ll take a couple of examples. Hilda Himmlewhite when I was a PhD student her work on social class and boys’ grammar schools was a taken for granted citation. There are very interesting resonances [with the idea of streaming today] but when was the last time any of you saw Hilda Himmlewhite’s work cited in anything about grouping in schools?

Discussion

A question for Steve – I think you said something along the lines of how sometime in the past the situation was there was an acknowledgement that waste was good. I’m interested in that and wondered whether you had any thoughts on a related thing and that is governmental dissatisfaction with RAE process in general and just a few years ago in Cambridge the investment in MIT which I believed soaked up tens of millions of pounds of taxpayers money. And perhaps more to the point whether you have any views about what kind of quality notions are appropriate.

Steve Fuller

Is this the Cambridge – MIT connection? At the end of this talk I spoke of the need for macro economic models so you see how the expenditures were flowing through the system. The problem is we don’t have much of a sense of what the system is here, so how do we track the funding cycle. This is where there is room for theorising. We are not used to thinking in these terms, so it looks like a lot of money is leaving the country. Macro economic modelling is important. I’m not familiar with the case but I guess from what you are saying this hasn’t been done yet to justify it but it should be. Because that is how you justify all expenditure in the welfare state, not through short term (some of it will be short term returns) but most of it will be long term – especially if you are justifying progressive taxation. And I think we lost that sense of system from our thinking.

Martyn Hammersley

It follows on from that. There are two ways of responding to you. One is well how do we play the game given that there are metrics? But you were also suggesting that the way in which we might set about measuring quality is wrong because it doesn’t take account of the need for waste and I very much agree with that. But a couple of things; obviously not engaging in micro management requires a certain amount of trust.

Steve Fuller
The audit culture does ruin this research culture that you need but on top of that is the incentive is to make alliances outside traditional research culture and I’m thinking of industry in particular which has its own accounting mechanisms and that gets used by the state as a surrogate for what you are doing and that is incredibly pernicious than just the fact that people are being micro managed. People are re-orientating the ends of their research. The problem with Polanyi is basically the model is almost a face to face model, it doesn’t scale up. He is talking about people for whom trust develops because they know each other – he is imaging an old world of science. The problem in a post World War Two period is this is a different issue here. This is where the State becomes incredibly important to protect researchers by having to produce a publicly recognised image of what the point of research is; where you have to have a long cycle and that return on investment doesn’t come immediately. By tolerating a large amount of wastage – let’s say the ten percent that go to University, one percent do something really useful, but that’s enough to justify the expenditure. That’s the kinds arguments that need to be made in order for people to want to fund higher education. But that’s not something scientists can do by themselves. It is something the State has to do in its commitment to knowledge policy.

**Birgit Pepin**

Two points really. One relates to what you call conceptual knowledge (the militarised I don’t know what to do with it) but the industrialised reminded me of work by Paul Ernslin – mathematics of education where he talks about progressive education and so on, I think that was quite interesting some of the parallels there. And the second comment was when you talked about the history of the citation index coming from somebody who thought about chemistry or thermodynamics. Now in thermodynamics you go from different states, from solid to liquid to gas and I was wondering whether he was actually thinking or forecasting these states for the educational research community? Would he envisionage the jumping from states?

**Steve Fuller**

Yeah, that’s what Price was on about. The thing about Price that’s important, the thing he is mostly known for is his distinction between big science and little science and that’s the stepwise change you are talking about. He thought there would be another stepwise process actually. With the launch of sputnik there was a big programme of getting students into science that hadn’t been done before. Science was an elite area for students to study and after sputnik, the NSF pushed for more students. Price thought this thing was going to keep on going forever, so he was imaging that by the year 2010 everybody would be a scientist in the US or trained as a scientist. He got it right that it was a stepwise process from little science to big science after World War Two. So yes that thermodynamic model with all these changes of state that was very much deliberate he was trying to map all those changes.
The point about the military thing – I understand what you are saying because in this century we are very used to military being very heavy capital, very much an industrialised process. But what I would ask you to consider – when the war in Iraq began, and Rumsfield was justifying it – it would be air force led, air force is efficient, air force is smart, it’s clean, it’s all shock and awe, you do it once it’s all over – that’s the Greek model I’m talking about (it failed obviously) but the point is when I say military thinking, that is the kind of thinking I’m talking about; these very neat clean, able to get the most solutions, the most bang for the buck. That thinking is still very much there.

But that was the rationale of MIT post war that you needed to invest in waste to get that bang for the buck.

**Steven Fuller**

The sociologist Alvin Gouldner coined the term the welfare-warfare state and in a sense when people feel they are threatened in common from some external foe, they are quite willing to adopt all kinds of welfare strategies to keep people on side. The maximum state of welfare was in the US was the Vietnam War because you wanted to make sure no one defected to the other side. There is this relationship, but the problem is when people feel there is no threat, people are free to go their own way and no one wants to pay taxes anymore.

**Alison Taysum**

You talked about the systemic dimension and the knowledge society moving from generation to generation and the elite generating knowledge in society beforehand. To what extent do you think it has the potential to democratise?

**Steven Fuller**

This is a real big issue for me because I’m a believer in the democratisation of knowledge. This is where a systemic perspective may be useful. There is no reason to think that the maximum benefit will come by everyone going to university but at the moment university is becoming a deposit point for everyone, where in a sense it is functioning, not only as universities have traditionally functioned but they’re also functioning the way in which high schools used to function and primary schools, where people get remedial reading skills and credentials for jobs and in the past all you needed was a secondary degree. Here someone like Alison Woolfe makes a lot of sense – that you have to have a very comprehensive education policy. Those kinds of issues [literacy, numeracy] ought to be dealt
with earlier in the system through improving the primary and secondary system rather than the tertiary sector.

Alison Taysum

What I was thinking more was tied in with Joe’s talk this morning about teachers as researchers and custodians of the field. Knowledge production will not be represented in the field…

Steve Fuller

In my thinking about this I was very much influenced by the Report by the Carnegie Foundation under Ernest Boyer called Scholarship Reconsidered. And here I think we need a more liberalised notion of what counts as scholarship especially among people who it’s pretty unreasonable to expect to contribute to top flight peer reviewed journals but are nevertheless research active in that they go to conferences, they participate, they ask questions, but they maybe don’t have the time or interest to contribute to peer reviewed journals which are typically considered as the gold standard by which research is measured. But nevertheless, I think they should be counted as research active. Why? Well maybe you are able to show that they improve course outlines year to year represent current developments in their field. So in that sense they are actively involved in the reproduction of new knowledge which to me is as important as producing new knowledge. I think we need a more liberalised sense of how we count staff as research active; I don’t think the answer is necessary have more people publish but rather that we have ways to encourage people to attend conferences or workshops and incorporate the knowledge they gain there in what is their normal academic arena. What I worry about is you get people publishing all this wonderful research, teaching three students at their university and then you have these other people who are on a teaching mill just doing stuff to earn a living. That’s what I worry about and the way you resolve that is not making more time for people on the teaching mill to contribute to peer review journals but rather to encourage them to go to the conferences and come up with clever ways of assessing that they’ve incorporated a new way of research in the way they’re transmitting knowledge. I worry sometimes that the elite standards have to be generalised more and that is the way to get democratisation.

A lot of your analysis is working on the assumption that the academic sector and universities in particular are producers of knowledge which of course is decreasingly the case…Internal validity has been replaced by external validity…does it work in my place, does it turn a buck and I think that’s
increasingly where we’re going. I think you have a third way – you have industrial – military I think retail. It really is starting to where university sits – it certainly is not the soul producer of knowledge.

Steve Fuller

Absolutely correct, I think that in a sense is the main lesson to take when we talk about our society as being a knowledge society, knowledge economy because I think there are some misguided academics out there who think that universities are now being recognised as being important. No, sorry, everybody else is now producing knowledge and the playing field has been levelled. And this is where universities have to figure out what they are about. Universities should not be in the business of doing everything or trying to do everything and succumbing to this. This is why persuading people there is value in getting an education that has a long term return on investment. One way to justify this is people change jobs more than ever. So the whole idea of vocational training is very short lived for justifying education. What you really need is an education that enables you to go through life where you have many different jobs where you need to think critically, you need to think expansively and a fairly traditional university education allows for that. Universities ought to play to that more. The only problem is our university administrators have no sense what a university is. The more that we are recruiting these people we’re going to be in big trouble this way. But it may mean that universities have to shrink. This is the problem, we are still in that bigger is better mode in the way that we measure success and as long as we are stuck in that we’re going to be worried about the idea of shrinking and downsizing and all of that.

Another thing that universities have been historically good at doing is certifying other organisations that claim to be providing some form of expert, competent knowledge…You’ve got to think about what is a university and I’m surprised university administrators aren’t more in tune with this.

Can I just ask you to clarify what you mean by a university?

Steve Fuller

I have a fairly classical view of a university – I wrote this book Knowledge Management Foundations and art of what motivated me was this business of the levelling of what knowledge is in society and how everything is producing knowledge and then the question arises for me, because remember I’m a social epistemologist which means I’m interested in knowledge from a normative standpoint – what
knowledge ought we have, but I’m also interested from a social standpoint – are there social institutions that are better suited for doing this thing than others. What arises is the university. What kind of institution is this, what does it do that is unique and distinctive that is worth promoting? My benchmark is Humboldt. There is a sense that what we really have to work for is having an institution where there is a strong incentive to produce knowledge, but at the same time, there is a strong incentive to distribute this as wide as possible to the classroom. Humboldt wanted to transform a backward country – this was going to be the engine for making Germany a unified, self-conscious nation. This was education for citizenship, something that goes beyond jobskills and the fact that the taxpayers are funding it is part of the story. Because in a sense you are being trained to be someone who is going to do good by the people who are investing in you. So your job is to produce this new knowledge, spread it as wide as possible in order to dynamise this society to prepare it for what will arise in its future. The question is who is going to compete to do that? There will be lots of people who want to provide you with skills to get your next job, there will also be people who want to do knowledge for profit, but the university is in a different kind of business and the return on investment is on a longer term cycle and this is the thing that makes it a unique institution. And it’s something we lose at our peril.

**Gary Thomas**

Steve you mentioned earlier the one percent thing, you are using, presumably an instrumental assessment of the one percent. Does that mean we should abandon any sense of having criteria for research?

**Steve Fuller**

I think it’s a complete nonsense that we evaluate research on a four to five year cycle – it just ends up encouraging the most superficial stuff. When you talk about the fields we’re in, there will be an enormous time lag before anything comes out and that never gets rewarded by our current system; we don’t operate with a long enough perspective to enable that to happen. We’re encouraging stuff that gets published and gets its maximum citation in the four to five year cycle in which it’s published.

**Sara Delamont**

Steve, I don’t think that’s right – I think you’re assuming that panels pay no attention to narratives that are in RAE 5. What are you expected to write in that narrative? You are expected to say how you classed your department, what did you say you will do in the previous one and how is your research since the last one – how have you built on it, what have you done, where are you going? And I think to assume that those narratives are ignored…
Steve Fuller

Why are the things that are submitted for the RAE, why are they the things that are published in the period rather than the things that have had the most impact in the period?