



Academic Work: Is it Worth the Trouble?

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review of:

S. Fuller (2002) *Knowledge Management Foundations*. Boston: Butterworth-Heinemann. (PB: pp. 288, £19.99, ISBN 0750673656)

M. Jacob and T. Hellström (eds.) (2000) *The Future of Knowledge Production in the Academy*. Buckingham and Philadelphia: Society for Research into Higher Education & Open University Press. (HB: pp. 192, £23.99, ISBN 0335206166)

In 1918, the sociologist and political economist Max Weber was concerned about the integrity of the academic profession and the poor career prospects faced by “a graduate student who is resolved to dedicate himself professionally to science in university life”. He believed that the German university was being Americanized in all disciplines, with the end result that younger scholars face “the same condition that is found wherever capitalist enterprise comes into operation: the ‘separation of the worker from his means of production’” (Weber, 1946/2004: 2). Whether they have possibilities to advance from this position is mostly a matter of chance. Whatever the case, only by strict specialisation – and passionate devotion – can the scientific worker wish to accomplish anything worthwhile (*ibid.*).

More than eighty years later, similar issues are discussed in a book edited by Merle Jacob and Tomas Hellström, *The Future of Knowledge Production in the Academy* (2000), and in Steve Fuller’s book *Knowledge Management Foundations* (2002). These books present new contributions to the 1990s debate on the ‘new mode of knowledge production’ (Gibbons *et al.*, 1994) and ‘academic capitalism’ (Slaughter and Leslie, 1997).¹ The basic question is whether universities’ increasing dependence on and contacts with the financiers and potential users of research – such as ministries and public funding agencies, companies and the EU – have positive or negative impacts on the organisation and conduct of academic work as well as those who do the work. The two books reviewed here highlight the positive impacts. This does not mean that they

1 See also Ziman (1996), Clark (1998), Etzkowitz (1998), Barry *et al.* (2001), Delanty (2001), Hakala and Ylijoki (2001), Nowotny *et al.* (2001).

are uncritical about the ongoing changes in academia: cuts in university budgets; increased emphasis on the relevance and commercial value of research; measures aimed at accountability and efficiency such as evaluation; and the growing division between teaching and research functions. Rather, their common starting point is that there is little worth in saving the 'traditional' academic practices and values and thus the ongoing changes – however violent and unpleasant they may seem – provide an opening for re-thinking the purposes and conditions of scientific knowledge production. As Merle Jacob puts it, "constant recitation of the traditional values of the academe [...] will achieve no positive gains for the university and [...] the present trends will continue well into the future" (p.141). Fuller's basic standpoint became clear already in his previous book, *The Governance of Science* (1999), where he stated that "what may be best for science may not turn out to be so good for scientists" (p.41). By this he meant two things: first, that scientists' views on science do not represent an 'objective truth', and second, that as a consequence of recognizing this fact, scientists may have to give up some of their vested interests.

There are also some significant differences between the two books. The articles in Jacob and Hellström's book are framed by and linked to the idea that the traditional mode of knowledge production (Mode One), which has prevailed in autonomous universities, is giving way to a fundamentally new mode of research (Mode Two), which is utility-oriented, transdisciplinary and project-based, and involves both academic and non-academic actors. Jacob and Hellström's book is basically an empirically based exploration of the challenges, promises and problems of Mode Two, and, as such, coherent and easy to read. In contrast, Fuller's approach is more philosophical and his inspiration comes from many different sources – political theory, economics and cognitive science – and his book covers a wide range of themes, ideas, classifications and examples, the common denominator of which is sometimes hard to discern. This fault aside, Fuller offers many interesting insights not only on the changes taking place in academia, but on the persistence of some 'traditional' characteristics, no matter how detrimental they seem.

Vested Interests and Disciplinary Strongholds

In line with the title of the book, *Knowledge Management Foundations* Steve Fuller, Professor of Sociology at Warwick University, starts with asking whether knowledge production can be managed – that is, organised, controlled and planned – and what are the interests linked to attempts to manage it, in business as well as in academia. The emphasis of Fuller's analysis is clearly on 'foundations': the nature of knowledge and expertise and the conditions of knowledge production in the 'knowledge society', where knowledge is increasingly treated as property that can be sold, bought and utilized according to (immediate) needs. He argues that while knowledge can hardly be treated as an ordinary good (divisible and private, like cars or bananas), labelling it as a public good (indivisible and available to all, like air) is no solution either. This is so because the notion of a public good tends to hide two important aspects of knowledge. First, not everyone is able to utilize knowledge equally, and therefore we should also think about

the access costs of knowledge. Second, the value of knowledge is related to its scarcity; for instance, the democratic extension of education tends to lower the value of degrees.

As Fuller points out, the intangibility and unpredictability of knowledge make it difficult to control and plan knowledge production and to evaluate and predict the value of knowledge. Nevertheless, attempts to this end are made both in companies (where knowledge managers and knowledge management flourish today) and in academia (where the demand for accountability and the measurement of results are continuously extended over new areas of activity). However, there is a crucial difference between these two sites of knowledge production. ‘Knowledge managers’ in companies are mainly interested in exploiting existing knowledge as effectively as possible while they tend to view the production of new knowledge as a necessary evil, costly and uncertain. They have no inherent interest in scientific discoveries, since small inventions and improvements can bring big profits and big inventions can end up being ignored by the market or do not even get there (pp.24-25). In contrast, the academic world, or at least the disciplinary strongholds of it, focuses on producing more and more knowledge – more discoveries, articles, books, lectures, innovations – with little concern about its potential uses.

While Fuller does not want to give in to the logic of ‘knowledge managers’ (a group of people whom he never describes properly), he applies the vocabulary of economics to question the academic logic according to which we never know enough. He argues that there is nothing wrong in considering the costs of academic knowledge production in comparison to the results it yields, or the opportunity costs of pursuing a particular line of inquiry instead of another. This amounts to rejecting the academic “dogma of ‘trickle-down effects’” (p.32) – the belief that the scientific knowledge produced now will inevitably be worth the effort sooner or later.

According to Fuller, re-thinking these issues – and thus perhaps entering into a fruitful debate with business-minded knowledge managers – has been hindered by the specialization of research and the power of disciplinary strongholds defending their own interests. A good example of this is the (American) physics community, which has faithfully promoted the assumption that, in order to progress, scientists must follow the internal conjectures of science – no matter what the costs – while they have no way of predicting what will be discovered and whether the discoveries will be useful to anyone. Fuller underlines that the aim of science cannot be to produce an unlimited number of ‘original discoveries’. Instead, progress in science should be measured in terms of “increased receptiveness to changing a course of action once its negative consequences have outweighed its positive ones for sufficiently many over a sufficiently long period” (p.54).

But why are these two characteristics – the ever increasing specialisation and power of disciplinary communities – so persistent? One answer is that the prevailing academic ethos tends to correspond with what Fuller calls wage orientation. In the wage orientation, the academic worker can be likened to a hard-working farmer: no matter what the harvest brings, the work itself provides satisfaction that makes her go on. In other words, it is the process and the present moment rather than products and the future that matter most. Even though the profit orientation has made its inroads into academia,

it has not (yet) influenced academic ethos as much as the rent orientation. The rent orientation is manifested in the British Oxford-Cambridge tradition where academics, having earned the appropriate credentials, have no particular incentive to make new innovations or re-direct their research efforts, as they can rely on the benefits brought by their past achievements.

This type of academic ethos is backed up by the prevailing publishing and citation culture and the evaluation methods based on it. Fuller reminds us that academics do not share knowledge because they are motivated by the Mertonian norm of communism, which states that scientific knowledge is public and everyone must have access to it (see Merton, 1942/1973: 273-275). According to Fuller, scientists share knowledge because this is the way a scientist can earn credit and because they fear colleagues' punishment, which is exclusion from the game where merits and reputation, research funding and academic posts are at stake. The same applies also to citation patterns: unless one refers to certain texts written by certain scholars, the text will probably be ignored.

In the appendix of his book, Fuller envisions a reform of the peer review system. He starts by listing the multiple and cross-cutting functions of peer review: for instance, exercise of quality control, standardization of the conduct of research, influencing the future direction of research, extending the learning of researchers, and protecting the public from using erroneous research results. The question of power is always present, and Fuller claims that currently the system maintains existing disciplinary hierarchies and orients science to past achievements rather than future. To moderate this tendency, he suggests reducing the domination of 'absolute peers' and giving a role to 'relative peers' who would include, for instance, people from other fields of study and more teaching-oriented academics, possibly also non-academic people. This way all expensive research initiatives would be evaluated in terms of their benefits to other research areas as well as teaching purposes. It is also vital that contract researchers, who are perhaps less interested in doing peer reviews and rarely asked to do them, would be included in the process.

These suggestions – which, it should be noted, have also appealed to science policy makers in many industrial countries – are part of Fuller's larger 'republican agenda', which is presented in the last chapter of the book. Management is here defined as 'governance' for the reason that this concept highlights better "the need to carve out more space for autonomy in the world of control" (p.197). Fuller offers no clear definition of republicanism, but it seems that he refers primarily to an ethic of civic participation. In the context of science, it means a general duty to recognize the constructed nature of knowledge production arrangements and to commit oneself to continuously questioning and improving these arrangements.

Fuller introduces three vehicles for governance. The first one is knowledge worker unions, by which Fuller refers to discipline-based professional associations, which would act as "a launch pad for a social movement within which standing conflicts in the society can be expressed, elaborated, and to some extent, resolved" (p.213). How current disciplinary strongholds could be transformed into movements of this kind remains, however, unclear. The second vehicle proposed is consensus conferences, which have already been experimented in many countries with varying results. In the

best case, they provide forums where academics can become more sensitive to lay people's concerns and lay people can have a say in the formation of scientific agendas. The ultimate republican vehicle for governance, however, is the university.

In the last pages of the book, Fuller provides an interesting and balanced analysis of the republican potential of different types of universities (German, American, British) and university strategies (priestly, monastic). However, the reader is somewhat disappointed: the analysis does not lead to a vision of the future university but ends up repeating the equal dangers of either isolating university from society or giving up to financiers' demands and thus losing autonomy. The book's one-page long conclusion merely sums up the argument that academia and society can either aim at producing ever more knowledge or think more closely about why we need all the knowledge. A more comprehensive conclusion would probably have helped the reader to better see the links between the various analyses and the potential of the university as well as other knowledge producing institutions as places where some of the problems could be solved.

Improving the Contract Researcher's Lot in Mode Two

The Future of Knowledge Production in the Academy, edited by Merle Jacob and Thomas Hellström and consisting of nine articles written by science studies scholars from countries such as Sweden, Britain and the US, continues from where Fuller stops. While Fuller's book can be seen as an exploration of traditional academic science, the articles in *The Future of Knowledge Production* are focused on the implications and challenges presented by the 'new mode of knowledge production'. Using Fuller's terminology, the writers are interested in developing Mode Two type of knowledge production so that it will not be identical with the profit orientation and financiers' short-term interests. Instead, they think that Mode Two should espouse 'republican' virtues such as concern for lay people's knowledge needs and the social implications of research. The writers do not apply Fuller's terminology themselves but it is clear their views are rarely in conflict with Fuller's. Fuller has also written the foreword of Jacob and Hellström's book.

The main focus of *The Future of Knowledge Production in the Academy* is on exploring life in Mode Two from the perspective of contract researchers. Merle Jacob sets the tone in her introductory article by asking: "is Mode Two research worth it from the individual researcher's point of view?" (p.25). The answer seems to be that this is not the case, as long as the university as an organization is built on the idea of strong disciplines and life-long tenure. As Jacob and Hellström argue in their joint article, today's universities seem to accept change in knowledge production – and to make organisational changes and reorient funding accordingly – only when there are immediate financial rewards (p.89). This means that Mode Two exists only in a distorted version, in which academics are in danger of ending up to be exploited and overworked slaves of companies, which have outsourced their knowledge production to universities with low costs. The common aim of the authors is to prevent this from happening and to imagine a university where aims are not dictated by companies but

where research done for and with non-academics would be appreciated as highly as discipline-based work.

One important question concerns the demands that Mode Two research puts on individual researchers. According to Elizabeth Shove (chapter four), who examines the day-to-day life in British university research centres in the social sciences, continuous engagement with non-academic actors has its advantages and disadvantages. On the minus side, there is the fact that traditional rewards like job security, public esteem and academic freedom are not available for the contract researcher. Yet, financiers expect the research also to be methodologically sound, thorough and original. There are also “the stresses and strains of simultaneously inhabiting different ‘worlds’” (p.65). Reputation has always been important in academia, but the contract researchers must be able to attain a good reputation in several arenas, and carefully calculate their investments in each of them, because they are only partly interchangeable. The contract researcher needs to have good communication skills and flexibility, and a certain amount of creativity to piece together projects that can be ‘sold’ to the financiers. On the other hand, Shove believes that the ensuing re-packaging of knowledge is what guarantees contract researchers some breathing space, since the financiers do not know exactly what they buy and what the researcher has sold to other financiers. The plus side includes also access to different networks, as well as the knowledge, data and money they provide.

Shove also pays attention to the question of how new entrants to the academy can gain the new skills needed in Mode Two research. She introduces two alternatives, both of which have their own faults. The first is based on apprenticeship. The young researcher is clearly in a subordinate position in her research group but she is included in all phases of the research process from the very beginning. This is the way she learns to design a project, to negotiate with the financiers of research and to write up the results in an appropriate way. She might have trouble with establishing herself as an independent researcher, as she tends to be associated with her supervisor and/or group. She is unlikely to bring any major changes to the networks she is introduced to.

Another way of getting to know the networks that are vital to a contract researcher is ‘cold calling’. The junior researcher does not rely on other researchers working in the same project or institution, but begins to develop her own contacts independently. She will have fewer benefits from the reputation of the group or supervisor, and much of her work may end up being useless. On the other hand, if she is successful, the benefits are all hers. If she chooses to leave the university, she takes the contacts with her.

Sujatha Raman (chapter seven) is also interested in the fate of researchers trying to cope with Mode Two conditions, but more from the perspective of labour politics. She criticizes Michael Gibbons and his co-authors for presenting a too harmonious picture of Mode Two research, whereas in reality the co-existence of Mode One and Mode Two only reinforces the divisions between haves and have-nots at universities. She also considers the possibility that in the future, knowledge production is ‘offshored’ to Third World countries. However, Raman argues that Mode Two presents an opportunity to overcome the ‘feudal patronage’ system that is part of the traditional, disciplinary mode of knowledge production. She believes that “the new class of ‘pieceworking’

academics” have little to lose and thus they might be ready to take radical action to change the hierarchical structures of academia. Results could be achieved only if researchers allied with other social activists interested in changing current forms of knowledge production.

On the other hand, Raman admits that, as no revolution takes place, academics doing contract research in Mode Two types of research environments still have the same objective as more traditional academics: to have tenure. They wish to have a secure income but also the prestige that is attached to having an academic post. In this sense, Mode Two does not form a self-sustaining research culture that could replace the traditional academic culture(s).

Several articles of the book look into the future of the university as an organization (chapters five, eight and nine). The basic argument here is that “the university needs to become networked and not just harbour networked researchers” (p.87). Relationships to non-academic actors need to be institutionalized and shifted ‘from sponsorship to partnership’. In the concluding chapter, Jacob envisions a network university consisting of inter-disciplinary networks, which unite researchers and the financiers and users of research. The networks would be monitored and evaluated by boards consisting of similar people. In this scenario, universities have to be willing and able to show that their knowledge is useful and to assist in the transferring and application of the knowledge. Accordingly, networks are evaluated in certain intervals and those that do not keep up with the performance criteria set for them are terminated. All research is done in projects and there are no permanent academic posts. All this means more jobs for knowledge managers, a group of people Jacob contrasts with traditional administrators but does not really describe more thoroughly.

Jacob’s vision is true to her claim that it is time to give up academic nostalgia and move to new directions. However, it is not very likely to solve the problems faced by contract researchers today, even though fights over academic posts and the division of people into tenured academics and project workers would end. It is also hard to believe that the current teaching obligations could be fulfilled in the network university. Jacob seems to recognize this, since at the end of her article she notes that the network university is not meant to be a model for universities in general, but an alternative and competitor to the public university. This leaves the reader to wonder how the majority of universities should be reformed, or whether one should accept that contract researchers can only find their home in the (future) network university.

Academic Work: Is it Worth the Trouble?

There are at least two ways in which the above question can be understood. One of them is present in Steve Fuller’s book, namely in the view that academic work is not valuable in itself but we should always consider its value in relation to the costs and benefits of knowledge production. But is this not exactly the point made over and over again by today’s science policy makers and financiers of research, who do not wish to waste their monies? The answer is negative: in addition to the nuanced analyses of the different

logics of knowledge production, Fuller provides a worthwhile agenda for making visible and improving the political processes of science. One step to this end is that academics themselves acknowledge that when defending the purity of science, they may actually be defending their own interests. At the same time, it has to be borne in mind that disciplines are not alike: as empirical research shows, they have different ideals and practices, different audiences and relationships to society as well as different internal structures and hierarchies (e.g. Becher, 1989; Slaughter and Leslie, 1997; Hakala and Ylijoki, 2001). Thus they also differ in terms of their 'interests' and the power they are able to exert.

Another type of answer to the question presented in the title is found in Jacob and Hellström's book. Here the focus is on the individual contract researcher, or any academic who does not hold a permanent academic post. She faces an incredible combination of demands and gets little in return; it really does not seem worth the effort, unless she is able to escape to the network university, which at least recognizes the nature of project research and tries to create continuity. And yet, even though interest in 'academic career' has declined in many countries, there are plenty of young people who are ready to try their luck in traditional academia. One reason for this is that today more and more people get a university degree, and when searching for a job, project research at the university may seem as attractive as other jobs available, the majority of which are short-term anyway. The critical question is what kind of researchers this young generation of project researchers will become: Do they have possibilities to develop such skills and characteristics that are needed in constructing their own research questions instead of simply providing solutions to problems provided by the financiers of research? How many of them can 'change sides' and become part of the disciplinary establishments; how many can become successful 'academic entrepreneurs'? Most important of all, do they have time and energy to act in a republican spirit and engage in reflection and debate on why they do what they do and whether things could be done differently?

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