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## The Place of Intellectual Life The University

### The University as an Institutional Solution to the Problem of Knowledge

At least since Descartes, the problem of knowledge has been posed *inside out*, that is as a problem for each individual to solve by approximating an external standard to which the individual may or may not have conscious access. There is no sense that epistemic access may be a scarce good, with one individual's access to knowledge perhaps impeding, competing with, or making demands on the epistemic access of some other individual. Rather, knowledge is regarded as what welfare economists call a *public good*, namely, one whose value does not diminish as access increases (Samuelson 1969). In contrast, my own version of social epistemology poses the problem of knowledge *outside in*, that is, in terms of the individual having to choose between two or more alternative courses of action, in full awareness that resources are limited and that other individuals will be simultaneously making similar decisions, the consequences of which will realize certain possibilities at the expense of others. I have called this the problem of *epistemic justice* (Fuller 2007a: 24–9). It implies an image of the knower as a 'bounded rationalist' engaged in 'knowledge management'. This line of thought has run throughout my work in social epistemology, even in my doctoral dissertation (Fuller 1985) and certainly Fuller (1988) onward. It presupposes that knowledge is a *positional good* (Hirsch 1977). This point has significant implications both for the interpretation of the time-honoured equation 'knowledge is power' and the design of knowledge-bearing institutions, especially universities.

In the slogan 'knowledge is power' (or '*savoir est pouvoir*' or '*Wissens ist Kraft*'), power involves *both* the expansion and contraction of possibilities for action. Knowledge is supposed to expand the knower's possibilities for action by contracting the possible actions of others. These 'others' may range from fellow knowers to non-knowing natural and artificial entities. This broad understanding of the slogan encompasses the interests of all who have embraced it, including Plato, Bacon, Comte and Foucault. But differences arise over the normative spin given to the slogan: should the stress be placed on the *opening* or the *closing* of possibilities for action? If the former, then the range of knowers is likely to be restricted; if the latter, then the range is likely to be extended. After all, my knowledge

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provides an advantage over you only if you do not already possess it; hence, knowledge is a 'positional good'. This concept also helps to explain the rather schizoid attitudes toward the production and distribution of knowledge that are epitomized in the constitution of universities. In short, we do research to expand our own capacity to act, but we teach in order to free our students from the actions that have been and could be taken by others.

By virtue of their dual role as producers and distributors of knowledge, universities are engaged in an endless cycle of creating and destroying *social capital*, that is, the comparative advantage that a group or network enjoys by virtue of its collective capacity to act on a form of knowledge (Stehr 1994). Thus, as researchers, academics create social capital because intellectual innovation necessarily begins life as an elite product available only to those on 'the cutting edge'. However, as teachers, academics destroy social capital by making the innovation publicly available, thereby diminishing whatever advantage was originally afforded to those on the cutting edge. Recalling Joseph Schumpeter's (1950) definition of the entrepreneur as the 'creative destroyer' of capitalist markets, the university may be similarly regarded as a 'meta-entrepreneurial' institution that functions as the crucible for larger societal change.

However, if the university is taken out of this systemic context, its effects can appear perverse. A clear example is the tendency for credentials to depreciate as more people seek them. The fact that a bachelor's, or even a master's, degree does not offer the same labour-market advantage as in the past is sometimes blamed on low-quality academic instruction or the irrelevance of academic to vocational training. More likely, though, the loss of advantage is simply a straightforward result of more job-seekers now possessing the relevant degrees, and hence cannot be so easily discriminated just on that basis. In this case, knowledge has lost its former power. A natural academic response is to call for more research, so as either to discriminate more effectively among current degree-holders or to establish yet still higher degrees in which the new knowledge is taught in the Sisyphean struggle for credentials (Collins 1979). Moreover, this strategy is deployed even within academia, as the PhD is now virtually required to hold any regular teaching post, even though doctoral candidates are still selected in terms of their research potential and trained with a research career in view.

Although research has been always an elite activity, the closeness – ideally the identity – of researchers and teachers in universities tended to overturn whatever initial advantage was enjoyed by the creators and funders of new knowledge. The ideal governing this cycle of creative destruction received its clearest philosophical justification with Wilhelm von Humboldt's reinvention of the university in early nineteenth-century Germany. It aspires to a form of knowledge that is 'universal' in both its potential applications and its potential appliers. Over the past half century, this ideal was recast as serving the welfare state's dual economic

function of subsidizing capitalist production (research) and redistributing its surplus (teaching). Not surprisingly, while universities magnified in size and significance during this period, the welfare state's recent devolution has thrown them into financial and wider institutional uncertainty (Krause 1996). The recent drive to have universities mimic business firms as generators of intellectual property amounts to no less than a campaign of institutional dismemberment, in which the university's research function is severed from the teaching function. Thus, we have seen the emergence of quasi-private 'science parks' whose profitable ventures threaten to arrest the normal flow of knowledge and to provide a legal framework for the creation of a knowledge-based class structure that is nowadays sometimes called *information feudalism*. The full implications of this phenomenon are treated in the next section. In the section after that, I explain it as an instance of *capitalism of the third order*, which is paradoxically an attempt to reproduce within capitalism the kind of social structure that capitalism is designed to eliminate.

### The Alienability of Knowledge in our so-called Knowledge Society

Consider the strangeness of 'knowledge society' as a label for what is supposedly distinctive about our times. To anyone innocent of social theory, it should be perfectly obvious that knowledge has always played an important role in the organization and advancement of society. What is new, however, is what the expression 'knowledge society' is meant to *conceal*. An easy way to see this point is to examine the other words that inhabit the same semantic universe as 'knowledge' in knowledge-society discourse: *expertise*, *credentials*, *intellectual property* are the sorts of things that denizens of the knowledge society either possess or can acquire. These three words have been listed in order of increasing *alienability*. Let us start with the least alienable: expertise.

The knowledge embodied in my expertise inheres to me in ways that make it not clearly distinguishable from other aspects of my personality. Indeed, the relatively inalienable state of my expertise renders it less tractable to the classical philosophical treatments of knowledge than to what I have called *phlogistemology*, named for that protean eighteenth-century chemical substance *phlogiston*, whose properties were defined exclusively in terms of whatever was left after all the other known factors have been removed or accounted for in a combustion experiment. The defining moment in the Chemical Revolution was when Lavoisier realized that what chemists called 'phlogiston' was sometimes oxygen and sometimes nitrogen, depending on the context of combustion. By analogy, 'expertise' probably refers, not to some unique quality of mind, but to a variety of behavioural dispositions that share little more than our current state of mystification about them.

More specifically, expertise is phlogistemic in the following senses, adapted from Fuller (1996):

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- (1) Expertise is not reducible to a formal procedure or set of behavioural indicators, yet those who possess expertise can make appropriate socio-epistemic judgements in real life settings.
- (2) The same act may be counted as manifesting or not manifesting expertise, depending on the social status of the agent (e.g., a novice's error may count as an innovation if committed by an expert practitioner).
- (3) There is little direct evidence for the presence of expertise. Rather, it is 'pre-supposed' in the lack of disruption in one's day-to-day activities.
- (4) Conversely, expertise operates as a default explanation for one's basic competence when one's thoughts or actions are otherwise under dispute (e.g., the fact that you disagree with me on this point does not lead you to conclude that I am generally off the mark).
- (5) The denial of expertise to someone is taken to be at least as much a moral judgement as a social or epistemic one, thereby inviting the charge that the denier is not merely critical, but uncharitable to the point of misunderstanding the person under scrutiny.

Expertise can be placed on a continuum of alienability that leads naturally to credentials and intellectual property via the common knowledge society locution that expertise can be 'acquired'. This peculiar feature is captured in point (2) above. It means that if I demonstrate that I have undergone a certain regime, then my actions are given much greater significance than they would be given otherwise. In order to appreciate the phlogistemic character of this process, consider that the actions themselves, as pieces of behaviour, may not have changed much before and after the application of the regime. Rather, what has changed is the context, and hence the range of responses, that are likely to follow the performance of those actions. This point was elevated to a metaphysical conundrum at dawn of the knowledge society in the form of the 'Turing Test', which hypothesized that it may be impossible to tell the difference between human and machine utterance, short of being told which was which. Knowing that a given sentence was uttered by a *bona fide* human rather than an 'artificially' intelligent machine licenses one to confer virtually limitless semantic depth on the former utterance, while reducing the latter utterance to a superficial, programmed response (Fuller 2002a: chap. 3).

However, we need not breach the human–nonhuman divide to make the point. Students typically (and perhaps justifiably!) fail to understand why they cannot get away with saying the more radical things contained in the texts they are assigned to read. The pat answer is to say that the assigned authors can back up their radical utterances, whereas students would be unable to justify their own versions of the same utterances. Of course, we teachers rarely, if ever, put this hypothesis to a direct test. Rather, we treat the hypothesis as a presumption: experts must fail by some canonically sanctioned test before we question their expertise, yet these tests tend to be administered indirectly and their results are always contestable (e.g. fading

citation counts as measures of invalidity or even irrelevance). In contrast, students must pass tests that are clearly defined, frequently administered, and still largely uncontested, before they are declared expert. We typically let the fact that the expert authors assigned in a course graduated from good universities, hold good jobs, and publish in good places, and are regarded highly by other such experts pass as grounds for supposing that they possess a depth in knowledge that is lacking in the student. Moreover, a consequence of possessing such credentials is that the expert is given the licence to make statements about things that have little to do with the content of one's qualifying examinations or even one's last book.

Once knowledge has begun to be alienated from the knower, such that one needs to acquire something not already possessed, the *content* of what one needs to acquire is no longer salient in explaining how credentials confer expertise on people. This point is clear to those who seek university degrees mainly to get credit for knowledge they have already come to possess by virtue of job or other life experience. That alone makes 'knowledge society' an extremely misleading expression, since knowledge is usually defined in terms of its content, i.e. some more-or-less valid and reliable representation of reality, without which one could not function. But it would seem that the *containers* of knowledge are really what matter in the knowledge society, e.g. whether what is said comes from the mouth of a Harvard PhD or a high-school dropout. The validity and reliability of one's knowledge may not substantially rise between the start and finish of an academic degree programme, but the likelihood that one's knowledge will be recognized as possessing those qualities does. (However, the speech of a Harvard dropout may carry authority, too, if there is sufficient capital backing and product delivery: witness Bill Gates.)

Thus, the expression 'knowledge society' may be informative, after all – namely, of the means by which social structure is reproduced. Alma Mater has replaced birthright as the biggest determiner of one's place in society, which means that academics have replaced the family and the clergy as the premier custodians of social status. This transition reflects not only the fact that formal education is required for doing virtually anything of social significance, but perhaps more importantly that it has crowded out most alternative paths of social advancement (Ringer 1979). While knowledge society rhetoric extols the virtues of 'lifelong learning' and apparently extends a hand to those returning to school after having made their way in the 'real world', in reality these adult learners are compelled to return in order to translate their life experience into the hard currency of credentials.

It may be useful at this point to take an aerial view of the alienation of knowledge. In trendier terms, what are the 'spatial flows' that define the knowledge society (Urry 2000)? The natural home of expertise is the workplace, where the requisite tacit knowledge is incubated and transmitted. However, the next stage, that of credentials, forces people out of their disparate workplaces to a central location, the university classroom, where their expertise is converted into something of generally recognizable

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social value by means of formal discipline. The final stage of epistemic alienation, intellectual property, involves a further move out of the classroom into the ultimate site of commodification, 'research', which immediately calls to mind laboratories but is hardly confined to those bastions of natural science authority. The social sciences have their own version, as epitomized in the work of the Austro-American sociologist Paul Lazarsfeld. Lazarsfeld's public opinion surveys enabled the extraction of tacit social knowledge to occur at the sites where they are naturally produced (typically, the household), the results of which are then used (or sold) to inform the manufacture of products and policies aimed at generating consumer demand or voter interest, depending on whether the client is in the private or public sector. In the former case, it is called 'advertising', in the latter 'campaigning'. In one clear sense, the social-scientific extraction of raw knowledge material is more efficient than its natural scientific counterpart, namely, that the only instruction required prior to the extraction of social knowledge is telling subjects the constraints within which they must reply to the survey questions.

What distinguishes the knowledge society from the conversion of labour to technology that has characterized the bulk of human history is the presence of academic 'middlemen' who ease the conversion from human to artifact by subjecting the former to explicit procedures. When the academics are civil servants, they provide a moment of mercantilism in what otherwise would be a straightforward account of capitalist appropriation. However, the analogy with mercantilism is not perfect. Universities never have – and certainly do not now – enjoy a monopoly on the disposition of knowledge products. Moreover, the semi-privatized character of higher education (long-standing in the USA and increasing in Europe) and the proliferation of corporate-sponsored science parks adjoining university campuses serve ultimately to render academia the tail of innovation that mistakenly thinks is wagging the capitalist dog. In fact, intellectual mercantilism's last stand is the teaching function of the university, which remains (at least for the time being) under the control of the state, even as the university's research function is increasingly devolved to the private sector.

The result partly resembles what Marx originally called 'Oriental Despotism', whose 'Asiatic' mode of production consists of an imperial power taxing its subject-nations, while leaving their local modes of production and social relations largely intact. This corresponds to the role of academics who, empowered by the state, can command the time and money of workers in need of credentials for career advancement, usually without transforming the workplace or sometimes even the workers' substantive knowledge. Under Oriental Despotism, the collected taxes were originally fed back into large-scale public works projects that solidified the empire's power. Here too there is an analogy in the history of the knowledge society, namely, the efforts taken by what Alvin Gouldner (1970) tellingly called the 'welfare-warfare state' at the height the Cold War era to consolidate the citizenry with comprehensive healthcare coverage

and educational access, at the same time it increased surveillance and military capabilities through the construction of vast electronic information and communication networks. These nation-building projects called forth the first burst of technically trained personnel of the post-World War II generation, especially in the wake of Sputnik in 1957.

However, with the decline of superpower hostilities in the 1990s revealing large state budgetary burdens, both large corporations and special interest groups have increasingly appropriated these projects for their own uses. The resulting political devolution and normative fragmentation is associated with the ideological emergence of 'postmodernism' and 'neo-liberal' forms of governance. These developments are normally cast as the continued penetration of capitalism into spheres of society previously protected by the welfare state. Without denying the considerable truth of this claim, once we see the original construction of the knowledge society's infrastructure as a latter-day version of Oriental Despotism, the privatization of the great information and communication networks start to look more like the breakdown of the Roman Empire into the feudal fiefdoms and free cities that characterized the Middle Ages in Europe.

Not surprisingly, then, on the margins of the knowledge society's boosters has flourished a clutch of foreboding theorists of the oncoming 'information feudalism' (Drahos 1995). What might count as evidence for this atavistic turn of events? The following three points will have to suffice here for an answer:

- 1 Human labour becomes increasingly transitory as a source of value, but only in part because more efficient mechanical means are developed to replace it. The other part of the story is that these new machines – e.g. expert systems – are increasingly protected by intellectual property law, which enables the holder of the relevant property rights (i.e. patent, copyright or trademark) to extract rents from those who would try to lower their own overall production costs. In the name of encouraging innovation, the legal system effectively converts the capitalist profit-seeking motive to a feudal rent-seeking one. This conversion had not occurred at the onset of the Industrial Revolution because, before the US Constitution explicitly prescribed the state's interest in systematically licensing innovation, the granting of intellectual property rights had been subject to the ruler's discretion, typically as a personal favour. There had been no expectation that eventually all of intellectual space would be divided into discrete domains as physical space had been under feudalism. For their part, the American Founding Fathers were concerned mainly with ensuring individual free expression (which required protection not only from censure but also from imitation) and collective wealth production (assuming that the nation that registered a patent stood most to gain from the invention's economic benefits). Given capital's increasingly transnational mobility over the last two centuries, intellectual property legislation would seem to meet the former aim at the expense of the latter.

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2 The more that credentials are required for employment, the less the knowledge content associated with obtaining those credentials matters to prospective employment. This is largely because credentials are no longer sufficient but merely necessary to securing a position. Thus, from being a principle of empowerment, credentials are now marks of exclusion. Under the circumstances, they have succeeded race and class as the premier mechanism for discriminating and stratifying a population. And like race and class, credentials turn out not to be an especially good job performance indicator but merely a lightning rod for resentment. As this feudal residue of credentials is revealed, private sector non-academic training centers emerge to undermine the virtual monopoly enjoyed by universities. But more importantly, and ironically, the surfeit of academically qualified people gives the competitive edge to those who possess traditionally *non-academic*, specifically entrepreneurial, forms of knowledge. This is no more evident than in the natural sciences. The 'expert' scientist enters and exits lines of research just ahead of the pack, invests in skills and equipment that are usable in the widest variety of projects, and constructs her knowledge products so as to extract a certain 'tribute' (be it an attribution in a citation list or a financial tribute in patent royalties) from their users. 'Knowledge engineers' design computers that simulate a field's expertise to eliminate still more academic competitors. The raw material for the simulations are of course experts themselves, who gladly sell their knowledge in the face of eventual obsolescence, once it has yielded most of its anticipated return. Here we see, perhaps most clearly, the wedge that the knowledge society drives between the two main functions of the university – teaching and research – for instead of feeding back into teaching, research either circumvents the educational process through privatization or renders it obsolete through automation (Fuller 2002a: chap. 3).

3 The surfeit of available information often described as an 'explosion' turns out to have the same effect as scarcity had in pre-capitalist times, namely, to slow the overall pace of intellectual progress. Before Johannes Gutenberg perfected and commercialized moveable type printing in the mid-fifteenth century, books could not be produced in large quantities; hence authors could not reasonably suppose that their readers had access to a library. This meant that the bulk of most texts was given over to acquainting readers with all the knowledge they would need to have in order to understand the author's distinctive contribution. Unfortunately, the propaedeutic task was usually so laborious that more energy was spent in summarizing and criticizing the past than in pushing forward the frontiers of knowledge (Eisenstein 1979). Little wonder, then, that the Copernican Revolution began only after Gutenberg, even though various heliocentric astronomies had already challenged the geocentric orthodoxy for over a thousand years. However, now we suffer from the opposite problem, as the speed at which texts are put on the market makes it impossible for anyone to catch up with all of them first hand. Consequently, instead of running ahead of the pack, academics run interference within the

pack, each trying to show his or her own indispensability to understanding what the others are doing. In this respect, the recently growing awareness of complexity in reality is nothing more than a projection of academics who need to define themselves in terms of their colleagues in order to occupy any recognizable intellectual position whatsoever (Fuller 2000a: chap. 5). Such a regime, perhaps most closely associated with Pierre Bourdieu's sociology of knowledge, ensures that innovation will occur only within the narrow confines of professionally sanctioned discourse, thereby minimizing the prospects for ideas being the source of major societal change (Fuller 1997: chap. 7).

Readers who doubt this gloomy prognosis should consider the recent computerization of the medieval practice of anonymous writing, or 'hypertext'. As was true generally of texts in the Middle Ages, the authority of the hypertext rests on the circulation patterns revealed by the superimposition of layers of commentary. Because the ultimate source of such a text is often unknown and its exegetical accretions are often at odds with each other, it is nearly impossible to subject the text to any focused criticism (i.e. to oppose a thesis that it asserts). Instead, one is forced to 'write against' or 'resist' the hypertext, which in turn unleashes another hypertext into its own separate electronic orbit.

The feudal precedent for the above developments is obscured by the dual sense of history that informs the continual condensing and surveying of texts that together artificially maintain the knowledge society's sense of its own originality. This duality consists of a *telescoping* and a *stereoscopic* phase.

On the one hand, history of the relatively distant past is *telescoped* so that knowledge-based social movements from the past that have been at least as complex and wide-ranging as the knowledge society are collapsed into a uniformly distributed ideal type – say, 'Protestantism', 'Enlightenment', 'Socialism' (Wuthnow 1989) – that is chosen more for its distinctiveness than its representativeness. Although a reasonable methodological principle when it was first introduced to enable sociology to formulate general hypotheses on the basis of historical data, it has since become a strategy for legitimating historical amnesia in an archivally saturated world. Therefore, any awareness of anticipations of contemporary developments is bound to be lost.

On the other hand, for the history of the relatively recent past, events are *stereoscoped*: that is, a wedge is driven between two closely connected developments, making them appear to be on opposite sides of a fabricated divide. Perhaps the clearest case in point is the alleged distinction between 'Mode 1' and 'Mode 2' knowledge production that is now so popular among European science policy gurus (Gibbons et al. 1994). Applied mainly to the laboratory-based natural sciences, Mode 1 stands for discipline-based research and Mode 2 for a hybridized sense of research that blends together the interests of academia, the state, and industry. Seen stereoscopically, the origins of Mode 1 are pushed back to the founding of the Royal Society in the seventeenth century (if not the ancient Greek philosophers), while the

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roots of Mode 2 are brought up to the period starting with the Manhattan Project that built the first atomic bomb (if not the post-Cold War devolution of the welfare-warfare state). However, historically speaking, it is only in the last quarter of the nineteenth century that *both* Modes come into being, almost simultaneously, in Germany. Laboratories had been traditionally excluded from universities (and confined to polytechnics) for reasons that amounted to intellectualized class snobbery (i.e. lab work required a manual dexterity that was alien to the hands-free world of liberally educated elites). Yet, once the laboratory sciences were ensconced on campus, they quickly made alliances with state and industry clients, most notably in the Kaiser Wilhelm Gesellschaften.

Indeed, what had made the laboratory sciences so alien to the classical constitution of the university *also* enabled them, once inside the university, to adapt well to externally oriented research projects. Here it is worth recalling a salient feature of Kuhn's (1970) account of science, which is based almost entirely on the laboratory sciences (with astronomy as the important exception): the "normal science" conducted by a paradigm's practitioners is autonomous not only from practical applications but also from the research trajectories of other academic disciplines. In that respect, a paradigm is a *doubly alienated* form of knowledge – a self-contained module of inquiry that does not require the institutional setting of the university for its existence or even its legitimation. Little wonder – though also little noticed – that Kuhn says next to nothing about academia as a site for the conduct of normal science. Only doctoral training programmes are worthy of some discussion. In contrast, the university's traditional nerve centre has been its undergraduate curriculum committee, as the site where the relevance of each discipline's major discoveries to a liberal education is regularly negotiated, resulting in "the creative destruction of social capital" discussed in the first section of this chapter. The humanities, which until about 1900 had dominated the universities, were never as narrowly insular as Mode 1 implies but neither as readily adaptive to external pressures as Mode 2 implies (Fuller and Collier 2004: chap. 2).

## **The Knowledge Society as Capitalism of the Third Order**

To understand the integral role of universities to the latest phase of capitalism, consider two general ways of thinking about the nature of capitalism. The more familiar one is a first-order account about how producers are engaged in perpetual – and largely self-defeating (according to Marxists) – competition to make the most out of the least, and thereby generate the greatest return on investment, a.k.a. 'profits'. Whatever its other merits, this account takes for granted that the relative standing of competing producers is self-evident, so that no additional work is required to identify the 'market leaders'. But in fact, such work *is* needed. This second-order account of how producers publicly demonstrate their productivity is the context in

which 'capitalism' was coined by Max Weber's great German rival Werner Sombart in 1902 (Grundmann and Stehr 2001). What contemporaries, notably Thorstein Veblen, derided as the 'conspicuous consumption' of successful capitalists, Sombart treated as the principal means by which capitalists displayed their social standing in a world where social structure was no longer reproduced as a system of fixed heritable differences. Thus, capitalists had to spend more in order to appear more successful.

However, it would be misleading to think of these expenditures as allowing capitalists to luxuriate in their success. On the contrary, it spurred them to be more productive in the ordinary, first-order sense, since their competitors were quickly acquiring comparable, if not better, consumer goods. Indeed, before long, the competition was so intense that it became necessary to spend on acquiring the connoisseurship needed to purchase goods that will be seen – by those who know how to see – as ahead of the competition's purchases. By the time we reach this 'third-order' capitalism, we are at the frontier of the knowledge society. That the 'knowledge society' might be a more polite way of referring to third-order capitalism should not be *prima facie* surprising. After all, the founding father of scientometrics, Derek de Solla Price, trawled through the welter of national economic statistics, only to find that the indicator that showed the strongest positive correlation with research productivity was not a measure of industrial productivity, but of electricity consumption per capita (Price 1978; Fuller 2002a: chap. 1).

A certain vision of economic history is implied in the above account of capitalism. In pre-capitalist times, consumption was done at the expense of production, which explained (for example) the fleeting success of Spain and Portugal as imperial powers. They failed to reinvest the wealth they gained from overseas; they simply squandered it. In contrast, capitalist consumption is second-order production supported on the back of increased first-order production. From a sociological standpoint, the most striking feature of this 'before-and-after' story is its suggestion that capitalism is innovative in altering the sense of responsibility one has for maintaining a common social order. In pre-capitalist times, this responsibility was, so to speak, equally distributed across its members, regardless of status. Lords and serfs equally bore the burden of producing the distinction that enabled lords to dominate serfs. Expressions like 'mutual recognition', 'respect', and 'honour' capture this symmetrical sense of responsibility. However, in capitalist times, it would seem that, like insurance in today's devolved welfare states, individuals bear this burden in proportion to their desire to be protected from status erosion. Thus, those who would be recognized as superior need to devote increasing effort to a demonstration of their superiority.

This last point becomes especially poignant in advanced capitalist societies, where at least in principle the vast majority of people can lead materially adequate lives while spending less time and effort on first-order productive pursuits. However, this situation simply leads people to intensify

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their efforts at second-order pursuits. As a result, for example, individuals spend more on education and firms on advertising, even though the advantage they gain in terms of first-order production is marginal or temporary. Yet, this expenditure is necessary for one to be seen as 'running with the pack'. Thus, we return to the concept of positional good introduced at the start of this chapter. The logic of producing such goods predicts that, over time, one's relative status will decline, unless it is actively maintained, which usually involves trying to exceed it, thereby raising the absolute standard that everyone needs to meet. Thus, an expanded production of positional goods, combined with increased efficiency in the production of material goods, results in the systemically irrational outcomes that we have come to expect (and perhaps even rationalize) as our 'knowledge society'. Specifically, the resources spent on acquiring credentials and marketing goods come to *exceed* what is spent on the actual work that these activities are meant to enhance, facilitate and communicate.

Of course, such a classic case of means–ends reversal is *not* systemically irrational, if it marks a more-or-less conscious shift in values. Thus, it may not take much to be persuaded that we really do produce in order to have something to sell, and we take up particular jobs in order to have a platform for showing off our credentials. The *struggle for recognition* therefore overtakes the *struggle for survival* – the ultimate triumph of the German over the English tradition in political thought (Fukuyama 1992: chaps 13–19). But this point acquires more of a sting in the case of so-called 'public goods', especially knowledge. In the case of such goods, producers are (supposedly) not only unable to recover fully the costs of production, but they would also incur further costs, were they to restrict consumption of their good. However, I would urge that so-called public goods be analysed as simply the class of positional goods that most effectively hide their production costs, specifically by everyone paying into a fund whose actual beneficiaries are undisclosed, perhaps because they are indeterminate (Fuller 2002a: chap. 1).

This abstract point may be illustrated by answering a concrete question: why is Einstein *not* entitled to a patent for his theories of relativity? The answer is that Einstein's theories were innovative against a body of physical science whose development had been funded by the German state through taxation and other public finance schemes, major beneficiaries of which were institutions of higher education. These institutions were, in turn, open to anyone of sufficient merit, who would then be in a position to contribute to this body of knowledge. Einstein happened to take advantage of this opportunity that was in principle open to all taxpayers. But even if Einstein had not existed, it would have been only a matter of time before someone else would have come along to push back the frontiers of knowledge in a comparable manner. But as long as it remains unclear from what part of the population the next Einstein is to be drawn, the public finance of higher education is justified. In that case, Einstein does not deserve the economic advantage made possible by a patent because he simply exploited an

opportunity that had been subsidized by his fellow citizens. I propose this as the 'deep rationale' for the production of public goods like university education and research that have been the hallmarks of welfare-state regimes.

### **Will the University Survive the Era of Knowledge Management?**

Academics are too easily flattered by talk of 'knowledge management'. They often think it points to the central role of universities in society. Yet, the phrase signals quite the opposite – that society is a veritable hotbed of knowledge production, over which universities do not enjoy any special privilege or advantage. Academics have been caught off-guard because they have traditionally treated knowledge as something pursued for its own sake, regardless of cost or consequences. This made sense when universities were elite institutions and independent inquirers were leisured. However, there is increasing global pressure to open universities to the wider public, typically for reasons unrelated to the pure pursuit of knowledge. Today's universities are expected to function as dispensers of credentials and engines of economic growth. Consequently, academics are no longer in full control of their performance standards.

In this context, knowledge managers have their work cut out. Former *Fortune* editor Tom Stewart (1997) has called universities 'dumb organizations' that have too much 'human capital' but not enough 'structural capital'. Behind these buzzwords is the view that a fast-food chain like McDonald's is a 'smart organization' because it makes the most of its relatively ill-trained staff through the alchemy of good management. In contrast, business as usual in academia proceeds almost exactly in reverse, as department heads and deans struggle to keep track of the activities of its overeducated staff. If a McDonald's is much more than the sum of its parts, a university appears to be much less.

Academics remain largely in denial about the impact of knowledge management, even though the sheer increase in the number of university heads drawn from business and industry concedes that McDonald's and MIT may be, at least in principle, judged by the same performance standards. A glaring recent example is Richard Sykes, whose appointment as Rector of Imperial College London was based largely on his successful merger of two transnational drugs companies, Glaxo and Smith-Kline. Not surprisingly, he tried – unsuccessfully as of this writing – to merge Imperial College and University College London to produce the UK's premier research-led university (at least as measured by research income). In any case, Sykes seeded the idea in the UK's academic management culture, resulting in the merger of the University of Manchester and its neighbour UMIST, the largest campus-based UK university (in terms of student numbers), a move advertised at the time as comparable to the hypothetical merger of Harvard and MIT, which are located on opposite ends of Massachusetts Avenue in Cambridge (USA).

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And should we automatically think that the next academic generation would resist such changes? Put bluntly: why should we expect the increasing number of academics on short-term contracts to defend the integrity of an institution that cannot promise them job security? Even PhDs quickly acquire the survival skills and attitudes of McDonald's much less-trained and disposable staff, as they become willing and able to move for better pay and work conditions (Jacob and Hellstrom 2000). Indeed, when adaptability to an ever-changing labour market becomes the premier value, the normative force of autonomous work conditions starts to fade. After all, autonomy implies the capacity to say no to external pressures, which in the world of flexible capitalism looks unreasonably rigid. Thus, a signature practice of academic tenure has been the entitlement to teach whatever one happens to be researching – even if it attracts only three students, two of whom are regularly offended by what the teacher says.

However, many academics – and not just professional knowledge managers – have endorsed recent steps taken to disaggregate the unity of teaching and research that has defined the university since its modern reinvention in early nineteenth-century Germany. These steps occur daily with the establishment of each new on-line degree programme and science park – the one reducing the university to a diploma mill, the other to a patent factory. Though they pull in opposing directions, these two 'post-academic' organizations share an overriding interest in benefiting those who can pay at the point of delivery. In this context, universities appear quite vulnerable, as they have always been hard-pressed to justify their existence in such immediate cost-benefit terms. But it would be a mistake to place all the blame for this 'service provider' view of universities on knowledge managers, or even the recent wave of neo-liberal ideology.

Academics who nostalgically recall the flush funding for universities in the heyday of the welfare state often forget that service provision was precisely what lay behind the appeal of academia to policymakers. The public was willing to pay higher taxes because either they (or, more likely, their children) might qualify for a course of study that would enable them to improve their job prospects or academics might come up with a cure or a technique that would improve the quality of life in society. The same mentality operates today, only in an increasingly privatized funding environment.

In short, a Faustian bargain was struck during the era of the welfare-warfare state that was typically cloaked in a social-democratic rhetoric. Universities grew to an unprecedented size and significance, but in return they had become the premier site of socio-economic reproduction. In the long term, this bargain has caused the universities to lose their political – and consequently their intellectual – independence, a point that is increasingly clear with the removal of state legal and financial protection. After having been in the service of all taxpayers and judged by the benefits provided to them, universities are now being thrown into a global market where US universities already enjoy a long history of providing high-quality knowledge-based goods and services on demand.

At least, this is how the shifting political economy of academia appears from the European side of the Atlantic. It is now common for university heads to complain that lingering attachments to the welfare state prevent governments from charging the full student fees needed compete with US universities on the world stage. They seem to assume that Americans are willing to pay a lot for higher education at the best institutions because these have a long track record of proving themselves in the market-place. However, this does not explain how, say, the Ivy League manages to officially charge the world's highest fees, yet require only a third of the students to pay them. Time-honoured universalist, democratic and meritocratic ideals may explain *why* the Ivy League has this policy, but the mystery for Europeans is to determine *how* they have pulled it off.

As it turns out, the European understanding of the American scene – especially at the elite end – is seriously flawed. What makes the flaw so serious is that it involves forgetting what has historically made universities such a distinctive European contribution to world culture. I shall return to this shortly. But at an even more basic level, this flaw should remind us of the long-term corrosive effect that marginal utility thinking has had on how we conceptualize value. Both welfare-state economics and the current wave of neo-liberalism agree that the economy is built from transactions in which the traders are simultaneously trading with each other and trading off against their own competing interests. Thus, the rational economic agent is willing to accept a certain price, but only for a certain amount of any good or service. Beyond that point, 'diminishing returns' set in and rational agents shift their spending elsewhere. This means that goods and services are judged by the prospect of their impact on the consumer in the relative short term. Such a frame of reference is fundamentally antithetical to the character of the university.

To their credit, welfare economists have long realized that their conception of the economy tends to devalue benefits that accrue only in the long term and especially to others not intimately connected to the agent (Price 1993). As we saw in the previous section, the welfare-state conception of universities as both instances and producers of 'public goods' was meant to address this problem by arguing, in effect, that it is cheaper to indemnify everyone in a society than to target particular citizens for providing the costs and enjoying the benefits. But to unsympathetic neo-liberal ears, this sounds like a concession that higher education is a market with an indeterminate price structure. Could this be because producers and consumers are impeded from effectively communicating with each other? Such a suspicion motivates the knowledge manager's general call for the removal of state barriers to the free competition of universities, which will quickly force them to restructure and perhaps even devolve, in the face of market forces.

However, buried beneath this now familiar line of thought is its anchoring intuition: the paradigm case of all economic activity is the exchange of goods that might occur in a weekly village trade fair between parties trying to

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provide for their respective households. From that standpoint, the main practical problem is how to clear the market so that no one is left with unsold goods or unmet needs once the sun goes down. This formulation of the problem makes at least three assumptions that are alien to the economic situation in which university has (always) found itself:

- 1 Each trader is both a 'producer' and 'consumer'. In contrast, the two roles are clearly distinguished in any transaction between a university and a prospective client, including a student.
- 2 No trader wants a surplus of goods, let alone accumulate as many goods as possible. Unused goods will either rot or be the target of thieves. In contrast, the sheer accumulation of knowledge – be it in books, brains or databanks – is central to the university's mission.
- 3 There is a cyclical structure to each trader's needs that ideally corresponds to the trade fair's periodicity. There are no inherently insatiable desires, only recurrent desires that are met as they arise. In contrast, the idea of termination is so foreign to academic inquiry that attempts to arrest or even channel its conduct have tended to be treated as repressive.

However, universities can be managed as other than multi-purpose service providers joined to their clients by discrete transactions that end once the academic goods have been delivered. What originally entitled a university to corporate status under Roman law (*universitas* in Latin) was its pursuit of aims that transcend the personal interests of any of its current members. This enabled universities to raise their own earmarked funds, which were bestowed on individuals who were "incorporated" into the institution on a non-hereditary basis. Such individuals typically negotiated their identity through examination or election, which required that they be willing to become something other than they already are. Along with universities, the original corporations included churches, religious orders, guilds and cities. In this respect, being a student was very much like being a citizen. Commercial ventures came to be regularly treated as corporations only in the nineteenth century. Before then, a business was either a temporary and targeted venture (akin to a military expedition) or an amplified version of family inheritance, the default mechanism for transmitting social status under Roman law.

The corporate origin of universities is of more than historical interest. The oldest and most successful US universities were founded by British religious dissidents for whom the corporate form of the church was very vivid. From the seventeenth century onward, American graduates were cultivated as 'alumni' who regard their time in university as a life-defining process that they would wish to share with every worthy candidate. The resulting alumni endowments, based on the Protestant 'tithing' of income, have provided a fund for allowing successive generations to enjoy the same opportunity for enrichment. In return, the alumni receive glossy magazines, winning sports teams (which the alumni worship every weekend), free courses and nominal – and occasionally not so nominal – involvement in university

policy. Two-thirds of Ivy League students have their education subsidized in this fashion. Moreover, the leading public American universities display similar, and sometimes even stronger, tendencies in the same direction. Thus, UCLA, the University of Michigan and the University of Virginia are 'public universities' that are 70 per cent privately funded, relatively little of which comes from full payment of student fees.

In contrast, the two main strategies for "privatizing" the universities in former welfare state regimes – market-driven tuition fees and income-based graduate taxes – operate with a long-term strategy for institutional survival that is nothing more than a series of short-term strategies. At most, these compulsory payment schemes would enable universities to replace the capital they invest in their students, but they would also provide little incentive for graduates to contribute more than had been invested in them. If anything, such fees and taxes could become a source of resentment, non-compliance and even overall fiscal failure, since in a world where knowledge is pursued as a positional good, it becomes harder to justify high-quality university education on a short-term value-for-money basis.

Therefore, to overcome the knowledge manager's jibe that they are dumb organizations, universities must endeavour to be wholes much greater than the sum of their parts. At the very least, this means that a university's value must be measured beyond the short-term benefits it provides for immediate clients, including students. The ideal of uniting teaching and research promised just such a breadth of organizational vision, one worth updating today. After all, universities are unique in producing new knowledge (through research) that is then consolidated and distributed (through teaching). In the former phase, academia generates new forms of social advantage and privilege, while in the latter phase, it eliminates them. This creative destruction of social capital entitles universities to be called the original entrepreneurial organizations. However, universities have been neither produced nor maintained in a social vacuum. With the slow but steady decline of the welfare state, it is time to recover the university as one of the original corporations, whose style of "privatization" is superior to the "trade fair" model that has dominated modern economic thought and today threatens the institution's integrity.

### **Postmodernism as an Anti-university Movement**

A telling but little remarked fact about the provenance of Jean-François Lyotard's (1983) coinage of 'postmodernism' is that it occurred in a 1979 'report on the state of knowledge' to the higher education council of Quebec. Lyotard dedicated his report to the 'institute', or department, where he held a chair in one of the new universities of Paris, wishing that it may flourish while the university itself withered away. This sentiment neatly epitomizes the postmodern normative posture – one that celebrates the endless proliferation of inquiries and condemns the submission of this

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'information explosion' to the institutional containment of the university, which, after all, presupposes a clearly bounded 'universe of discourse' that is traversed in a 'curriculum'. Put in historical perspective, Lyotard challenged the last bastion of medievalism in the modern university, namely, the idea that everything worth saying can be confined to its walls. This image made sense in the thirteenth century, when the physical universe was held to be bounded, with the earth, and humanity more specifically, at its centre. The university was then quite literally a microcosm.

Lyotard's dedication of *The Postmodern Condition* reversed the definition of postmodernism that Daniel Bell (1973) had introduced only a decade earlier as the cultural analogue of 'postindustrialism'. In Bell's usage, postmodernism meant the rise of an academically informed class of public administrators who contained and sublimated the potentially disruptive effects of the information explosion in the name of a benevolent, albeit technocratic, welfare state. Here the comprehensive critical vision of the university – above and beyond specialist knowledge in particular disciplines – was the key point. In this respect, Bell's establishmentarian vision of postmodernism presupposed a future for intellectuals not unlike that of Alvin Gouldner's 'new class', the welfare state's answer to the revolutionary party vanguard in a post-Marxist world (Gouldner 1979). But neither Bell nor Gouldner anticipated the devolution of the welfare state and its associated challenges to the university as a well-formed social entity. Lyotard's crystal ball turned out to be clearer, as his disparagement of the structural power of the university was of a piece with neoliberal calls for unimpeded innovation and Margaret Thatcher's declaration of society's non-existence. This is the postmodern future we got. To be sure, the differences in the postmodern prophecies put forward by Bell, Gouldner and Lyotard can be explained largely by their respective vantage points in higher education.

In 1963 Bell was commissioned by the trustees of Columbia University to diagnose increasing student calls for 'relevance' in an undergraduate curriculum that had been unique in requiring that all students spend the first two years studying the classics of Western philosophy, literature, art and music, followed by two years of intensive study in a traditional academic discipline. The call for 'relevance' was operationalized as proposals for interdisciplinary studies programmes that took as their subject matter a region of the world or an aspect of humanity (i.e. class, race, gender) whose significance had not been adequately represented in the constitution of academic departments. Much to the relief of the trustees, Bell held firm to the classical ideal – bolstered by Thomas Kuhn's trendy 'paradigm' conception of scientific research – that traditional academic departments offered protected space for the autonomous pursuit of fundamental inquiry, on the basis of which secondary inquiries driven by social concerns could then be built at the postgraduate level (Bell 1966). As it turned out, Bell's Solomonic judgment failed to anticipate that by 1968 Columbia would be in the forefront of worldwide student revolts against 'the establishment'.

For his part, Gouldner was struck by the growth of higher education as a credentials mill since the end of World War II. Although most of those passing through academia were not motivated by the ethos of pure inquiry, the occasion of their training provided an opportunity for instructors to enlarge and replenish the public sphere by instilling a critical attitude in whatever fields the students happened to pursue. But Gouldner's sudden death in 1980 prevented him from seeing that once 'proper universities' started to present themselves unabashedly as dispensers of credentials, they would encroach on terrain much more familiar to more locally oriented institutions as polytechnics and colleges. Moreover, the gradual abandonment of the welfare state's meritocratic mentality over the next two decades would compel universities to compete in a buyer's market where, given the ratio of institutions to matriculants, any pedagogical imposition unrelated to the acquisition of credentials – such as 'critical reflexivity' – could be assured an unwelcomed response.

In striking contrast to Bell and Gouldner, Lyotard took a more cynical view of higher education as a member of a university that had been commissioned by De Gaulle to placate the '68ers', academic radicals who demanded more open admissions to elite institutions. In practice, this had only served to coopt the radicals and compromise the independent standing of academia in French society. From Lyotard's standpoint, the creation of new universities was the state's last desperate attempt at maintaining social order in a world that was quickly exceeding its control. In this context, the appeal to academic standards was often a disguised reactionary ideology for arresting the cross-fertilization of ideas and the novel developments they breed. This explains Lyotard's profound antipathy for Juergen Habermas's 'ideal speech situation', a projection of the university's founding myth that is unrealizable except through the imposition of closure on an indefinite plurality of cross-cutting discourses. In Lyotard's hands, the university was reduced from a transcendental concept to a cluster of buildings where representatives of these discourses have chance encounters and set up temporary alliances, subject to the strictures of the buildings' custodians (a.k.a. academic administrators).

What has enabled Lyotard's cynicism to triumph over the opposed yet still idealistic visions of the university espoused by Bell and Gouldner? The key to the answer may be found in the material bases for the expansion of higher education in the modern period. Lyotard, Bell and Gouldner can be seen as reflecting on the same set of developments associated with highly productive capitalist economies married to welfare-state systems. These constitute the blindspot of Marxist political economy, which had provided the classic explanation for the rise of a critical intelligentsia capable of revolutionary leadership. Marx had failed to anticipate that the state would resume a regulatory role in advanced capitalist societies comparable to its role under mercantilist regimes in the seventeenth and eighteenth centuries. Not only would the state provide investments and incentives to capital development, but it would also use its powers of taxation to

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strengthen welfare-oriented institutions designed to buffer the populace from the effects of business-cycle fluctuations. It would mean a steadier growth curve for the economy, but at the cost of an escalating operating budget for the state.

According to Joseph Schumpeter (1950), who first clearly formulated this scenario, the captains of industry would have little choice but to accept increasing tax rates on their profits as the price for avoiding the mass displacement of workers that would sow the seeds of revolution. In the end, innovation's 'creative destruction' of the marketplace would be itself seen as a threat to economic security. While neither capitalist nor socialist would realize their heroic visions, everyone would be able to survive comfortably in the same world. In short, the future would be Swedish.

For Bell and Gouldner, the Schumpeterian scenario provided plenty of scope for the work of intellectuals, even if it precluded the Second Coming of Lenin. Among the expanding welfarist institutions were the universities and other state-licensed institutes of higher learning, which provided training and employment for intellectuals. Before the mid-nineteenth century, these intellectuals would have been – much like the original Enlightenment *philosophes* – itinerant workers with no particular attachment to the current political economic order. But over the last 150 years, and markedly since the end of World War II, these people have become civil servants who, in the first instance, address each other in jealously guarded ('peer-reviewed') zones of discourse and only then, after that initial filtering process, the larger society. Consequently, their potential for incendiary speech has been domesticated into reasoned cultural critiques and piecemeal policy advice.

Marx would not have been pleased, but Bell and Gouldner saw hope. Because the smooth functioning of advanced capitalism depends on the maintenance of its welfare system, the intellectuals who staff the system collectively hold enormous power in shaping the course of society. In Bell's vision, this would lead to greater rationalization of the economy, 'the end of ideology', in his memorable phrase, as class conflict would be resolved into specialized administrative tasks. For his part, Gouldner envisaged a somewhat less complete sublimation of ideological conflict. Intellectuals would continue to take it upon themselves to make, in the name of humanity, overarching claims that would invariably contradict each other. However, the increasing specialization of both their knowledge and interests would make the partiality of their claims more apparent than ever, thereby enabling the emergence of a more critical public culture.

However, from Lyotard's Parisian perch, Bell and Gouldner were indulging in wishful thinking, not least because they took for granted that the state could indefinitely translate ever-fragmenting knowledge practices into principles of social structure by employing increasing numbers of intellectuals. What happened instead circumvented both Schumpeter's vision of capitalism's excesses contained by a fully socialized state and its nightmare counterpart, what James R. O'Connor (1973) originally called the 'fiscal crisis

of the state', whereby an over-extended social-services budget would lead to a renewed cycle of class conflict, perhaps even on the epic scale originally envisaged by Marx. Those in search of a suitable role for intellectuals in the postmodern world failed to anticipate that the state would simply devolve its central welfare provision, including health and education, thereby enabling capitalism would simply continue apace.

Lyotard's postmodern cynicism has been vindicated by an unholy alliance between academia's classical ethic of autonomous inquiry and the increased disciplinization of the scaled-up modern university. Originally all academics believed they were engaged in *the same* autonomous inquiry, which was driven by some overarching ideal, such as The Truth. The commonality of this ideal gave considerable scope for probing criticism that frequently challenged reigning orthodoxies and crossed disciplinary boundaries. The university provided the institutional space that made these free-ranging inquiries possible. We see remnants of this attitude in public debates towards such 'undisciplined' issues as the existence of God, the meaning of life and even the evolution of human traits. However, that attitude is quite alien to today's professional academic sense of inquiry, in which autonomy is relativized to particular disciplines. Thus, instead of seeking The Truth wherever it may lead, one applies a 'paradigm' or follows through a 'research programme' until its intellectual resources – or, more pointedly, financial resources – have been exhausted. In effect, then, the division of labour in today's academia has modularized, perhaps even decontextualized, the commitment to autonomous inquiry. A vivid reminder of this development is the ease with which the research units of some natural-science departments can be transferred from the institutional setting of the university to another – say, a science park or a corporate facility – without seeming to lose anything in the translation.

The postmodern condition, then, marks the literal *disintegration* of the university, as each discipline becomes increasingly capable of getting on the business of inquiry without worrying about the fates of the other disciplines. Traditionally, the university had means to check such tendencies toward self-absorption. The most mundane, but no less potent, was a common pool of financial resources from which the various departments would draw their operating budgets, which would then have to be justified, if not to each other, to the university's finance committee, whose default position would favour cross-subsidizing the departments (i.e. the poor benefit from the rich). However, with the emergence and active encouragement of extramural income, this default position is losing its moral suasion, and the finance committee is more generally losing its significance as a forum for discussions of the costs and benefits of pursuing alternative lines of inquiry. The other traditional academic check on disciplinary self-absorption is, of course, the university's principal clientele: *students*. Curriculum planning remains a sobering exercise for evaluating the relative importance of bodies of knowledge and modes of thought for the life of the ordinary individual. Indeed, as we shall see in the next

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section, this turns out to be the source of leverage that critical intellectuals can exert over the knowledge system.

At this point, a few words are in order about the role of interdisciplinarity in promoting the postmodern condition, since my earlier discussion of Bell and Gouldner suggested that, at least in the 1960s and 1970s, interdisciplinarity promised to revive the university's critical edge. To be sure, appeals to 'interdisciplinarity' remain in vogue across the academy today. However, they have been given a postmodern spin previously lacking (Fuller and Collier 2004: Introduction). This becomes especially clear upon recalling that Humboldt founded the modern university with the liberally educated citizen in mind. From that standpoint, knowledge production was presumed to be 'always already' interdisciplinary. Disciplines as we currently know them – corresponding to departments, journals and dedicated graduate degree programmes – only gradually emerged as institutionalized settlements between clashing research programmes governed by overarching world-views. Thus, people who we now so clearly call physicists, chemists, biologists, physicians and even engineers were quite hard to distinguish for most of the nineteenth century. The same applied even more strongly in the so-called non-natural sciences. Moreover, sophisticated surveys of academic knowledge up to the first third of the twentieth century presupposed this murky and fractious process of disciplinization (e.g. Cassirer 1950; Merz 1965).

However, as disciplinary boundaries hardened in the twentieth century, intellectual gaps between the disciplines began to emerge as blindspots, which interdisciplinary work could then be explicitly dedicated to redress. The Cold War motivated much of this thinking, as national security issues focussed academic minds on both sides of the communist–capitalist divide to organize themselves as a unified whole. In this context, operations research, systems theory and artificial intelligence began to portray the existence of disciplines as obstacles to efficient knowledge flows. By the late 1960s this perspective had come to acquire a radical counterpart in the West as feminists, multiculturalists and others came to see disciplines as actively suppressing politically unruly subjects that prevented the academy from effectively communicating with – and, more to the point, enlightening – the larger society.

The many symbolic and material conflicts that transpired between the establishment and the counterculture during this period occurred against the backdrop of an expanding university sector. However, this began to end with the fall of the Berlin Wall in 1989. Afterward interdisciplinarity started to acquire its current postmodern cast. Travelling under the guise of 'Mode 2' knowledge production, to use the Newspeak preferred in European science-policy circles (Gibbons et al. 1994), interdisciplinarity was became a vehicle for introducing non-academic performance standards designed to break down such normal trappings of academic life, as technical language and self-regulating work habits, all of which were presented as glorified 'rent-seeking'. 'Interdisciplinarity' henceforth came to refer to all the 'real world' problems that discipline-based academia routinely ignored or devalued. Thus, research

agendas and even degree programmes were urged to include potential ‘users and beneficiaries’ outside of academia in their very constitution.

The precincts of academia that have flourished in this environment are ones in which ‘interdisciplinarity’ is expressed mainly through the multiply applicable method, as opposed to the comprehensively explanatory theory. As a point of contrast, consider that the more academically centered of interdisciplinarity had been based on disciplines confronting their theoretical and methodological differences to reach some kind of synthetic resolution, as each recognizes something in the other, which then serves to limit the hegemonic claims of one’s own discipline. We might regard such interdisciplinary ‘interpenetration’ as the *semantic ascent* approach (Fuller and Collier 2004: chap. 2). But in our Brave New World, the biggest obstacle to interdisciplinarity is precisely the theoretical baggage that the different disciplines carry because by virtue of their specific histories, as that then makes it difficult to proceed in collaborative inquiry. This is, so to speak, the *semantic descent* approach, which encourages one to head for a lowest empirical common denominator, as in evidence-based policy, in which the different theories – and even methods – used to gather and interpret data are seen as ladders that must be removed once climbed. Striking in this regard is the semantic dissipation of the word ‘theory’ itself, as in such popular interdisciplinary research tools as ‘rational choice theory’, ‘game theory’, ‘complexity theory’, ‘chaos theory’, ‘actor–network theory’ – none of which really explains the patterns they highlight in the data.

Of course, some may say that I pose a false dichotomy with regard to the point of interdisciplinary knowledge production. It need not be either a matter of constructing a higher form of academic knowledge or taking the ends of knowledge out of the hands of academics altogether. It may simply involve learning to appreciate that other disciplines exist with ways of knowing valid in their own terms. But that nostrum is a bit like trying to learn modern languages without ever facing the intercultural conflicts generated by their speakers.

To conclude this section, let me put the impending disintegration of the university in what might be called ‘world-historic’ perspective. I have elsewhere written of *the post-epistemic condition*, whereby science is pursued as something other than a form of inquiry: e.g. as a strategy for securing employment or a factor in creating wealth (Fuller 2000a: chap. 3). In the post-modern condition, the university is being pulled apart by these alternative pursuits, which effectively disaggregate the teaching from the research function. At its best, the university was a catalyst of social change when its two functions engaged in mutual regulation: teaching curbed the esoteric tendencies of research, while research disrupted the routinizing tendencies of teaching. The result was that each new generation of students would be imparted knowledge that was, in some respects, substantially different from that imparted to earlier generations, thereby providing an initial impetus for larger societal change. However, this delicate balance between the two

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functions is in danger of being lost. On the one hand, teaching is being reduced to the dispensation of credentials; on the other, research is being privatized as intellectual property: the one driven by the employment market, the other by the futures market.

These developments may be new to the recent past but they are not entirely original to either our period or our culture. In fact, despite its name, the post-epistemic condition has been the normal state-of-affairs in non-Western cultures that have had institutions of higher education for at least as long as the West, most notably China and India. As part of the most extensive comparative sociology of schools of thought ever undertaken, Randall Collins has discovered a most remarkable fact about knowledge production in China and India (Collins 1998: 501–522). These Asian regions had harboured most of the theories and technologies that were relevant to the Scientific Revolution several centuries before their seventeenth century realization in Europe. However, they lacked institutions that brought them together in constructive confrontation, such that a set of theories might be subject to an experimental test. Instead, the technologies tended to be designed and refined entirely in the context of either large-scale public works projects or specially commissioned artisanship. Moreover, with the exception of some fleeting fertile episodes, even the theoretical schools remained largely immune to the scholastic disputations that marked the first flourishing of the universities in medieval Europe. Rather, the Eastern doctrines would be elaborated in the context of study for civil-service examinations, just as technical innovations would not be theorized beyond what was necessary to accomplish an appointed task.

In short, teaching and research in the East were developed too closely in relation to separate ‘performance standards’ to enable a social-epistemic transformation as radical as the West’s Scientific Revolution. But is the situation so different today? Might we not be in the process of *undoing* the Western university’s distinctive achievement by, say, disjoining the evaluation of research from that of teaching in our academic audits – reducing the former to the number of students graduated and the latter to the number of papers generated, without any concern for what might be the relationship between the two? To be sure, this undoing is bound to occur, at least at first, with few outward signs. After all, the material wealth of the East is generally seen as having outstripped that of the West until the late eighteenth or early nineteenth century, some two or more centuries after the Scientific Revolution is normally said to have begun (Frank 1997).

However, a clear sign of the university’s retreat from its public mission is what Lyotard identified as the decline of ‘meta-’ or ‘grand narratives’ in academic discourse. These are academically generated stories of how things came to be as they are and how they are likely to turn out in the future. Meta-narratives are typically informed by theoretical frameworks that move beyond, and even challenge, ordinary modes of understanding. The pervasive influence of grand narratives associated with, say, capitalism, socialism or scientific progress more generally, has probably been the best advertisement for the value of critical intellectual work in the nineteenth and twentieth

centuries. At the same time, however, these narratives have displayed enormous arrogance, often in disproportion to their basis in fact. Two world wars and countless instances of organized violence over the last 150 years may have been avoided, had such narratives not proven so captivating.

To be sure, some grand narratives continue to make their way out of the university's precincts to society at large. The biological sciences currently enjoy great vogue as the source of various genetic and evolutionary just-so stories, most of them minted only after Lyotard's original diagnosis of the postmodern condition (e.g. Wilson 1998; Pinker 2002). Nevertheless, these narratives, though counter-intuitive in plot structure and explanatory strategy, tend to provide legitimation for the dominant beliefs and customs in society. Moreover, the compelling character of these broadly 'sociobiological' tales lies in their removal of human agency from history, such that no one appears especially responsible for their fate. In that sense, they do not function in the same 'critical' fashion as the older meta-narratives. Indeed, it would not be very difficult to connect the ascendancy of sociobiology with the 'orientalizing' of intellectual life suggested above, especially if one understands genetics in karmic terms (Fuller 2006a: Part III). But that would return us to a diagnostic mode, whereas I wish to suggest a more positive way forward.

### Regaining the University's Critical Edge by Historicizing the Curriculum

Historical consciousness is a precondition for critique, a lesson that education researchers have come to learn (Goodson 1999). But to what extent has the curriculum of various academic disciplines cultivated historical consciousness? Let us start with the discipline whose pedagogical mission has probably most self-consciously influenced its research trajectory: *philosophy*. Philosophy is unique in that its deepest problems are routinely presented in introductory courses, with successive courses merely adding more nuanced formulations and sophisticated analyses of these problems without any pretence of resolving them. To a large extent, recent philosophers are presented as occupying roles – e.g. 'realist' or 'relativist' – that have been reproduced for centuries, if not for ever. Students enrolled in philosophy courses are not expected to learn solutions to philosophical problems, let alone solve such problems themselves; rather, they are to think 'philosophically' about them. For any given problem, the actual history of philosophy is fitted into a cycle of a few competing solutions in perennial tension. This means that, if we control for differences in language, were Aristotle transported to a contemporary introductory philosophy course, he should have little difficulty understanding the instructor. At least, that is the ideal towards which the philosophy curriculum strives.

Exceptions to this goal are most apparent in the branches of philosophy influenced by the special disciplines, where time's arrow is more directly registered on the curriculum. The role of mathematics in the development of modern logic is the obvious case in point, one where we would not expect

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Aristotle to outperform a clever undergraduate without further training. However, the historical character of the maths curriculum is itself rather unique. Roughly speaking, the curriculum recapitulates the history of the discipline, as each branch of mathematics is taught as a generalization or limitation of an historically precedent branch. Arithmetic reflects on counting and geometry on measuring, while algebra reflects on arithmetic and analytic geometry on algebra and geometry, and the rest of the maths specialities reflect on these. Most debates in the history of modern mathematics have turned on the ontological status of the entities and the validity of the propositions generated through these successive reflections, especially if they fail to correspond to the structure of physical space and time, as revealed by either commonsense or physics (Collins, 1998: chap. 15). Here mathematics converges with metamathematics, returning the field to its philosophical roots, albeit in a much more technical guise. But students are typically not introduced to these debates, except as a means of shoring up the autonomy of mathematical inquiry in the face of 'naive' objectors.

Despite periodic attempts to present pedagogy in the natural sciences as a recapitulation of disciplinary history, twentieth-century teaching in these fields has been dominated by a 'rational reconstructionist' approach to the past. This means that the curriculum is organized from the perspective of contemporary researchers interested in the most efficient means by which the past can be shown to have issued in the current research frontier. Thus, theoretically simplest matters are taught first, followed by those which build upon them, gradually leading to the research frontier. Only token gestures are made to include bits of the discipline's actual history, typically as concrete examples for abstract points.

Not surprisingly, those trained in a natural-science subject who eventually devote most of their energies to researching the history of their field end up being identified primarily as historians rather than scientists, which is to say, keepers of a dead past that has no bearing on the training of today's science students. A frequently overlooked implication of this point is that the selective appropriation of history for present-day purposes exists symbiotically with the attempt to re-enact the past in order to understand it on its own terms. In effect, the exclusion of history from the natural-science curriculum enables the history of science to exist as an autonomous field of inquiry without the interference of practising scientists.

Attitudes toward history are considerably different, when we turn to the humanities and the social sciences that do not conform to the natural-science model of pedagogy. In the first place, students are introduced to the subject matter in a pre-disciplined form that roughly corresponds to commonsense. Thus, students learn about art works before art theory, literature before literary theory, and so forth. Whereas the first economics course introduces students to the most basic concepts and the simplest models of the economy, the sociology curriculum usually begins by presenting the complexity of social life, which then calls forth the need for an explicitly sociological analysis.

The pedagogical procedure exhibited in the sociology curriculum makes the discipline's perspective appear artificially connected to its putative subject matter, thereby opening the door to students questioning the value that is added by adopting the perspective. In effect, the 'soft sciences' perpetually re-create in the classroom their original struggle for legitimation by drawing attention to the 'unnatural' character of disciplining the subject matter. If the maths or natural-science curriculum were constructed in this fashion, then students would leave such courses knowing a lot about, say, the phenomena of moving objects but still left wondering whether physics had much to contribute to a deep understanding of them. However, such students do not exist because physics teachers generally take care to present the richness of physical reality in ways that presuppose the need for the conceptual apparatus of their discipline.

To be sure, in the 100-year period leading up to World War I, there were numerous attempts to establish the natural science curriculum on a basis that closely resembles current practice in the humanities and social sciences. The poet Johann Wolfgang von Goethe and the positivist Ernst Mach conjure up the broad church of sympathizers with this approach, which (in the days before Husserl) flew under the flag of 'phenomenology', as in 'phenomenological optics', to name a field to which both Goethe and Mach contributed. Moreover, far from being an unfulfilled fantasy, this humanistic approach enabled the natural sciences to make their way from the polytechnics to the universities in the nineteenth century. Indeed, the profound influence of Hegel's rival and proponent of *Naturphilosophie*, F.W.J. Schelling, on successive generations of German experimental scientists is only slowly being rediscovered – and then only by historians of science (e.g. Heidelberger 2004), whose work is carefully cordoned off from the science curriculum. One important exception to this general tendency is the ongoing attempt by Creationists, including intelligent-design theorists, to restructure the teaching of biology, especially in the United States and Australia, but increasingly also in the United Kingdom.

A key part of the Creationist proposal is that the phenomena associated with the development of life on earth – evidence from palaeontology, morphology, etc. – should be presented separately from the conceptual apparatus of the Neo-Darwinian evolutionary synthesis. The result would make biology textbooks look more like those in sociology, as explanatory frameworks are introduced only once rich accounts of the phenomena have been presented. Students would be positioned as evaluators of competing frameworks, each of which would appear to have certain strengths and weaknesses when judged against the full range of evidence (Meyer et al. 2007). In the Creationist proposal, these alternative frameworks would be taken from biology's otherwise hidden past: Biblical Literalism, Cosmic Perfectionism, Intelligent Design Theory, Lamarckianism, and so forth (Fuller 2007c, 2008).

Those both pro and con the Creationist proposal agree that its rhetorical import would be to subvert the pedagogic hegemony enjoyed by

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Darwinian evolution by natural selection. Theories previously treated as defunct would receive a new lease on life, as students are forced to weigh Darwinism's actual merits against those that might have followed, had one of the defunct theories enjoyed a comparable level of development. The presence of these historic alternatives would also throw into relief persistent conceptual and empirical difficulties with Darwinism that have been obscured by its paradigmatic status in biology. Radical as this prospect would be for biology, it would be quite familiar to sociology instructors, for whom no theory from the past ever seems to be completely discarded. Indeed, were sociobiology come to dominate the scientific study of social life in the twenty-first century, one could easily imagine sociologists themselves adapting to their advantage the rhetorical strategy behind the Creationist critique of the biology curriculum.

An important difference in attitudes towards history is brought out in the Creationism controversy. It centres on the perceived reversibility of a discipline's history, especially back to a level of understanding that coheres with 'pre-disciplined' forms of experience. Clearly, evolutionary biologists regard Creationist pedagogical innovations in this respect as a great leap backward. They follow Thomas Kuhn (1970) in holding that the achievement of consensus around a highly elaborated theory like the Neo-Darwinian synthesis is the clearest sign of progress in science. In contrast, the Creationists would establish a curriculum that would seek to undermine this sort of consensualism (Fuller 2008: chap. 1).

But as I have already suggested, one need not be a religious zealot or an intellectual reactionary to argue for such views. For example, Mach was reluctant to make atomic theory central to the teaching of the physical sciences because, while useful in the conceptual and experimental inquiries of professional physicists, the theory's counter-intuitive nature impeded the comprehension and appropriation of physical knowledge by engineers, artisans and other non-experts. For Mach, the estrangement of atomic theory from ordinary experience reflected the idiosyncrasy of the history of physics, which like other fields has developed heuristics that work very well in specialist settings but less well outside them (Fuller 2000b: chap. 2). Accordingly, the task of education is to release these specialist insights into larger social settings, *not* to reinforce their original theoretical packaging by treating students as if they were potential recruits to the specialist ranks.

The pedagogical tension elaborated in the previous sentence is most clearly played out in the social science disciplines with the longest histories of trying to approximate the methods of the physical sciences, namely, psychology and economics. In these fields, students are routinely exposed to a schizoid curriculum. The foundational courses divide the disciplinary domain into theoretically relevant categories, be they 'sensation', 'perception', 'cognition' (in the case of psychology) or 'the market', 'the household', 'the firm' (in the case of economics). However, later courses in 'history and systems' – still often required of all majors – subvert this rational reconstructionist presentation by recalling the discipline's origins in

matters closer to the heart of students' interests. Typically, these turn out to be 'conceptually ill-formed' (a.k.a. 'applied') areas that rate low in the current academic value system. Thus, the theoretically driven successes of, say, neoclassical economics or cognitive psychology are offset by their conspicuous silence on issues relating to the economic and psychological aspects of everyday life, which turn out to be the strengths of such 'defunct' movements as institutionalism (in economics) and behaviourism (in psychology). Moreover, this curricular dissonance is easily exacerbated, as academic department teaching loads are increasingly borne by those whose interests and training are too far away from the 'cutting edge' to secure large research grants.

No doubt an educational theorist possessing a Panglossian turn of mind will praise this state-of-affairs, since it enables psychology and economics to take advantage of the segmented market for teaching and research: highly research-active staff can remain aloof from students, as long as their less active counterparts engage them in the classroom, even if this means that students will be most animated by inquiries that suffer low status within the discipline. While this strategy may help academic departments survive our current audit culture, it ultimately proves Lyotard's point that the university has become little more than a physical container for disparate activities, each of which may be performed better elsewhere, if allowed to go their own way. Cutting-edge researchers may be given a freer hand in a science park or a think-tank, while popular teachers may be likewise able to pursue their calling without distraction as part of a vocational training programme or the Open University.

To be sure, the reward structure for these different institutionalizations of research and teaching would need to be rendered equitable. But assuming that can be done, what role would remain for the university? None, according to the logic of postmodernism. But I propose a radical solution, one that would reposition the university as the institution responsible for regulating society's knowledge flow. In short, it would redress the problems of 'uneven development' that arise from knowledge production outpacing its distribution.

### **Affirmative Action as a Strategy for Redressing the Balance between Research and Teaching**

Fuller and Collier (2004) distinguishes *plebiscience* and *prolescence* as general knowledge policy orientations. In a nutshell, plebiscience is academia's 'natural attitude' of treating education as little more than an adjunct to research, whereas prolescence is the reverse attitude that involves evaluating research in terms of its teachability. In terms of the role assigned to history in the curriculum, the former approximates the situation in the natural sciences and 'harder' social sciences, the latter that in the humanities and 'softer' social sciences.

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Plebiscience draws on the meaning of 'plebiscite' in political science as the reduction of suffrage in mass democracies to a formality for ratifying current government initiatives or providing a choice between options, none of which strays far from established policies. This is academia's 'natural attitude' to education, which treats it as the functional equivalent of a plebiscite that has little substantive impact on research. It presumes that the research frontier can never advance too quickly and that education must either raise students to that level or, failing that, instill a sense of deference to the latest developments. Plebiscience is regularly reinforced by histories of science that omit any mention of the mechanisms for distributing new knowledge, implicitly assuming that any friction in the dissemination process must be due to incompetent teachers or backward students. Plebiscientific attitudes run very deep in our thinking about knowledge. Rare is the academic administrator or research funding council that has the temerity to declare the elite inquiries of the research frontier an indulgence rather than the standard. (Usually, a budgetary crisis first needs to intervene.) Thus, the experimental natural sciences come to be valued above all other disciplines for their ability to 'lead from the front' pedagogically, that is, to have their curriculum driven by the research frontier, a point elaborated in the previous section.

From the standpoint of the history of higher education, the problem with using the natural sciences – especially the laboratory-based disciplines – as a general model is that they were amongst the last to be incorporated within the mission of the university, and arguably were never fully assimilated. The location of research laboratories on university grounds in most countries dates no earlier than the third quarter of the nineteenth century. Moreover, this was largely a defensive response to the proven financial benefits of research emanating from laboratory settings that were typically funded by industry and situated in polytechnic institutes. Left to their own devices, universities were still governed by aristocratic prejudices, reaching back to the Greeks, which associated knowledge gained through manual labour with drudgery and even slavery.

But a Faustian bargain had to be struck in order to house these industrially inspired forms of knowledge. The capitalist ethic stipulates a universe of boundless productivity to complement the lack of natural limits to human appetites. One could never innovate too much because there were always new markets to conquer or, more precisely, old markets to reconfigure to one's competitive advantage. Eventually this became the university's own ethic. Its legacy is the mindless preoccupation with the number of writings produced and the number of citations to such writings amassed – all done without consideration of the qualitative significance of these quantitative indicators (Fuller 1997: chap. 4). The epitome of this perverse logic is that universities have increasingly encouraged its staff to secure as many patents as possible, despite the lack of evidence that much commercial value is generated in the process (Hinde 1999).

In contrast, the prolescence perspective starts with the realization that plebiscience is an historical aberration that began when universities felt the

need to mimic the value system of capitalism, thereby reducing the public value of knowledge to the (relatively) private conditions of its production. To regain the public character of knowledge, then is, economically speaking, to recover distribution as a mode of production. In more classically academic terms, the classroom experience must be reintegrated into research under the covering term of 'inquiry'. In the previous section, I discussed this strategy as a matter of historicizing the curriculum. As its name implies, 'prolescience' takes its cue from the mass of society, the 'proletariat' in that sense: the state of knowledge in society is measured by what the ordinary citizen, not the expert inquirer, knows. The prolescientific cure for plebscience involves a shift in the image of knowledge production. Whereas the plebscientist envisages a clear research frontier at any given moment, which functions like a major river into which tributaries ultimately flow, the prolescientist turns this image on its head, interpreting the presence of a clear research frontier as a monopoly in need of dissolution, much like a major river that flows into a delta. The means for effecting either of these fluvial transformations is, of course, education (Fuller 2000a: chap. 6; Fuller 2000b: Conclusion).

The prolescientific task of inquiry is to render new knowledge claims compatible with as many different background assumptions as possible. Undertaking this task requires dissolving the currently sharp distinction between teaching and research – especially insofar as these activities are evaluated by separate means. In sociological terms, it involves a two-step process: *demystification* and *detraditionalization* (Beck et al. 1994). One would begin by revealing the specific historical reasons that a particular research programme first arrived at a generally valued form of knowledge. That is demystification. Then, one would show that this knowledge can be assimilated and used by a variety of research programmes, often to ends quite different from that of the originator. That is detradditionalization.

In the long run, success for the prolescience perspective would amount to converting the pedagogy of all the academic disciplines into the model followed by the humanities and the softer social sciences. It would make the dissemination of new knowledge in the larger population a prerequisite to any claims to epistemic progress, much as Mach and the Creationists would have it. Education would no longer be the mere handservant of research but rather take an active role in checking the worst tendencies of research to become overspecialized and overcommitted to certain domains of inquiry at the expense of others.

My proposal would take affirmative action legislation to its logical conclusion, extending academia's universalist aspirations from the range of people included in the pursuit of knowledge to the ideas they can legitimately entertain while so engaged. At the moment, affirmative action functions to redistribute the advantages enjoyed by, say, white middle-class males to the rest of the population in matters relating to student admission and academic employment (Cahn 1995). Typically the success of these redistributionist policies is measured in terms of an increase in the proportion

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of desirable positions held by members of traditionally disadvantaged groups. However, disadvantage continues to be suffered not only by groups of individuals but also, and perhaps more trenchantly, by schools of thought.

Current affirmative action regimes may do much to facilitate the movement of non-whites, the working class and women to highly valued academic positions, but it does relatively little – at least directly – to reorient the values that academics place on various schools of thought. Not surprisingly, the members of subaltern groups who most readily benefit from affirmative action are those whose educational and research interests most neatly conform to the dominant paradigms.

Of course, certain strands of identity politics argue that the mere addition of traditionally unrepresented groups will eventually transform the dominant lines of inquiry, since those groups harbour forms of consciousness that cannot be fully assimilated in mainstream culture. However, the empirical evidence for this hopeful hypothesis is far from obvious. On the contrary, one need only look at the number of people from traditionally disadvantaged groups who balk whenever their success is linked to their ethnic, gender or class identity. These people typically think it is better to have won by ‘the rules’ than to have changed them. Cultural critics may scoff at this attitude as ‘mere’ assimilationism that disregards the interests of fellow class members. Yet, it may be that the cultural critics are projecting the value they themselves place on iconoclasm, which may be neither so easy nor desirable for the people they criticize.

A more direct approach to affirmative action at the level of schools of thought would provide incentives for prolescientific pursuits, such that *everyone* is rendered responsible for making new knowledge available to the widest range of people possible. In that way, the university need not relinquish its Enlightenment aspiration to universalism, while at the same time acknowledge the socio-historically situated character of all forms knowledge. The twist is that this character would be now treated as a problem to be addressed, not a brute fact. One obvious consequence of this policy would be a blurring of the distinction between teaching and research. It is common nowadays to class as ‘merely pedagogical’ the task of rendering difficult ideas in a form that students can understand. However, in a prolescientific academic regime, this activity would be equally classed as research, as the academic must determine how much of an idea’s original mode of expression – especially its theoretical language – must be retained to impart the relevant insights for the intended audience.

I envisage this task as comparable to the ‘reverse engineering’ of technology, whereby an industrial innovation is analysed into its component parts in order to figure out how it works, with an eye to designing an inexpensive and improved version of the product for a target market. When reverse engineering is amplified into a general economic policy, historians of technology speak of the ‘Japan Effect’, which should serve as a reminder that over the centuries, the balance of world trade has been often redressed by

nations capitalizing on the (unplanned) benefits that come from *not* being the first to arrive at an idea, finding or invention (Fuller 1997: chap. 5 ff.).

Academic research remains captive to the cult of priority, even though the material conditions that made it a reasonable attitude toward new knowledge has radically changed. When the pursuit of inquiry was a leisured activity, done only by those not bothered by having to make ends meet, it was treated as a game, in which being the first to achieve a certain result would merit a prize – but not much more, certainly not intellectual property rights in the modern sense of patents and copyrights. Players in this game were presumed to be of roughly equal ability, so that the difference between winners and losers would ultimately turn on matters of chance, not deep issues of personal competence or commitment to a particular research tradition.

A proper history of how priority came to be destiny in academia would take seriously the transition in the idea of research from leisure to *labour*, specifically one out of which people had to earn their entire living. At that point, the search for new knowledge began to appear more like activities in the primary ‘extractive’ sector of the economy – mining, fishing, farming – except, of course, for the uncertain nature of the relationship between original effort and ultimate significance. (In that sense, *prospecting* is a better analogue.) Indeed, the attitude toward any knowledge found became *proprietary*. Moreover, it would not be out of line to describe the course of academic inquiry over the last two centuries as a series of attempts to ‘colonize’ the lifeworld, success at which can be judged by the felt need for the curriculum to play catch up with the research agenda. But is this trend reversible?

I began the section before last by observing that ‘postmodernism’ in its most widely used sense was born of disillusionment with the university’s role in state-driven attempts at social control. Specifically, Lyotard saw the teaching function impeding the natural proliferation of research trajectories. And while he may have correctly identified the reactionary social role of the university in his day, the use of the curriculum to curb, reorient and channel research is not itself reactionary. In fact, it has been a potent vehicle for democratizing social life by inhibiting the emergence of new knowledge-based forms of elitism. I illustrated this point by considering the role of history across the academic curriculum, singling out the humanities and ‘softer’ social sciences for their pedagogical attentiveness to the contingent character of research developments. If there is a role for critical intellectuals in academic life today, it is in terms of spreading this ‘prolescence’ mentality in whatever discipline they happen to practice and resisting all attempts to sever the evaluation of research from that of teaching. This amounts to an extension of ‘affirmative action’ principles from disadvantaged groups to schools of thought.

I have argued that the university is the greatest sociological innovation of the modern era (interview with the *Guardian*, 30 April 2007). It is the institution that has done the most to allow knowledge to be pursued with impunity, while maximizing its impact in society: the ‘unity of research and

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teaching' that characterizes the mission of the modern university. This mission was the brainchild of the Prussian education minister Wilhelm von Humboldt who first applied it to the University of Berlin in 1810.

In today's terms, Humboldt reinvented the university as an institution dedicated to 'the creative destruction of social capital'. On the one hand, research emerges from networks of particular scientists, investors and other stakeholders who are tempted to restrict the flow of benefits to themselves. On the other hand, the university's commitment to education compels that such knowledge be taught to people far removed from this social capital base, who may in turn take what they learn in directions that erase whatever advantage the original network enjoyed. All of this is to the good: it contributes to the overall enlightenment of society, while spurring the formation of new networks of innovation. Unfortunately, this virtuous cycle is short-circuited as academics are increasingly encouraged to think of teaching and research as necessarily trading against each other.

### **Academics Rediscover Their Soul: The Rebirth of 'Academic Freedom'**

In late 2006, British academics formally discovered the concept of academic freedom with the formation of 'Academics for Academic Freedom' (AFAF) under the leadership of Dennis Hayes, the first president of the UK's consolidated University and College Union, the largest post-compulsory education union in the world. The organization arose in response to several independent developments that have appeared to reinforce a sense of restriction on what academics could teach and research: (1) fears of offending students, who in light of newly imposed tuition fees have come to think of themselves as 'customers' for academic knowledge (where the customer is always right); (2) fears of alienating actual or potential external clients for university research by criticizing, say, government or corporate policies. As a result, several hundred academics signed the following statement:

#### *Statement of Academic Freedom*

We, the undersigned, believe the following two principles to be the foundation of academic freedom:

- (1) that academics, both inside and outside the classroom, have unrestricted liberty to question and test received wisdom and to put forward controversial and unpopular opinions, whether or not these are deemed offensive, and
- (2) that academic institutions have no right to curb the exercise of this freedom by members of their staff, or to use it as grounds for disciplinary action or dismissal.

The media immediately epitomized the movement as aiming to protect 'the right to offend', which places the emphasis on self-expression rather than, say, seeking the truth wherever it may lead. This spin is unsurprising since in the

English-speaking world, freedom of expression is presumed to be a fundamental civil right. Thus, the burden of proof is placed upon those – typically agencies of the state – who would curtail it on behalf of the greater good. Consider Justice Oliver Wendell Holmes's famous example of arbitrarily shouting 'Fire!' in a crowded theatre, taken from his judicial decision in *Schenck v. United States* (1919). The problem it raises is simply that of licence in liberal societies, solutions to which depend on how much a society can tolerate and who is authorized to judge. While Holmes's example certainly involves speech, there is nothing especially *intellectual* about it. (However, the exact nature of *Schenck* complicates matters, in ways we cannot address here, as it concerned a socialist whose 'shout' consisted in widely distributed leaflets arguing that America's need to enter World War I was a trumped-up false alarm.) Indeed, 'freedom of speech' is probably best understood as naming a set of distinct freedoms that are expressed via a common medium: academic freedom, freedom of worship, freedom of press, freedom of assembly. The scope of each needs to be justified separately.

In the context of its origins in nineteenth-century Germany, academic freedom is better seen as the prototype for some larger and later notion of intellectual freedom than a special case of some timeless archetype. In this respect, academic freedom follows the common pattern of universalist projects of extending to the many what had been possessed by the few. Of course, as Hegel was especially fond of observing, various things may be lost and gained in the process of translation. But without awareness of this process, it is all too easy to slip into metaphysical appeals to 'intellectual freedom' underwritten by chimerical intuitions married to half-baked notions of human nature.

The original German political presumption was clearly authoritarian – namely, that no one has a right to free speech unless it is delegated, which in turn requires legislating a clear sense of the relevant rights *and* obligations. The principled pursuit of truth was defended as a narrow guild right for academics, who were obliged to protect it by ensuring they expressed themselves within the canons of reason and evidence that is normally their job to uphold. Thus, the AFAF Statement is not claiming that academics can say whatever they want simply because they are academics. As with all guild rights, the issue turns on proper use of the tools of the trade, and here the phrase 'question and test' is crucial to the scope of the freedom being defended.

Academics should be allowed to argue, either in the classroom or on television, that the Holocaust never took place, that Blacks are intellectually inferior to Whites, or that thermodynamics renders evolution impossible – but only under one all-important condition: that they are then obliged to provide arguments that can be subject to critical scrutiny at the same level of publicity. They cannot get away with saying that it is just their opinion or an article of their faith, full stop. In fact, very few controversial academics are so reticent with their reasons. But those who refuse to offer reasons debase the currency of academic life – even, I might add, when they assert quite inoffensive positions.

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No doubt academics are no different from ordinary people in viscerally holding beliefs that they cannot defend with the tools of their trade. In that case, the terms of academic freedom require that they keep their mouths shut. However, the normative significance of silence is seriously compromised by a climate of political correctness, partly influenced by the increased university auditing. Academics might be nowadays reluctant to mobilize the intellectual resources needed (e.g. by applying for grants) to give their more outlandish views a fair public hearing simply because of the censure that voicing such opinions would bring down on them.

As for the more fearless academics who publicly defend offensive positions, at the very least they force opponents to state the precise grounds on which they take offence, which is never a bad thing in a society that fancies itself rational. That the repeated airing of offensive positions might give solace to undesirable political factions is a fair risk for an enlightened society to take. If the words of a controversial academic are touted as supporting such a faction, the academic is obliged to state where he or she stands on the matter. It is not sufficient simply to say one's words are being opportunistically used. This point goes to the guild element of protecting the tools of intellectual trade.

In short, to exercise intellectual freedom is to enable our ideas to die in our stead, to recall Karl Popper's neat phrase. This is 'the right to be wrong', the ability to assert now without compromising one's ability to assert in the future, even if one's assertions are shown to be false (Fuller 2000a). Intellectual freedom in this sense presupposes an institutionalized dualism, such that, literally, you do *not* need to put your money where your mouth is: 'speculation' in the intellectual and financial senses are kept apart. A true believer in intellectual freedom would thus wish for an environment in which one can commit what statisticians call Type I errors with impunity – that is to say, err on the side of boldness ('false positives').

The modern model for this environment is academic tenure, which was originally introduced to simulate the property ownership requirement for citizenship in ancient Athens. This historical link was forged by the founder of the modern university, Wilhelm von Humboldt, to whom Mill's *On Liberty* is dedicated. On the one hand, an Athenian citizen who was voted down in the public forum could return to his estate without concern for his material security; on the other, his economic significance for the city obliged him to offer opinions in the forum at the next opportunity. Citizens who refrained from self-expression were routinely ridiculed as cowards.

Correspondingly, if academic tenure were policed more rigorously for its entailed obligations, then the conditions surrounding its current erosion would not be tolerated. To the increasing number of academics who know only of the current neo-liberal knowledge production regime, tenure looks like an excuse to never stray from one's intellectual comfort zone. But even if many – if not most – tenured academics conform to that stereotype, it is entirely against the spirit of tenure and indeed arguably merits censure.

At the same time, a much more charitable view should be taken towards tenured academics deemed ‘publicity seekers’ who self-consciously – yet often sincerely – advance outrageous views in the public forum. These people routinely expose themselves to criticism, in response to which the life of the mind is performed for society at large. Whether they ultimately win or lose these struggles is less important than the occasion they provide for thinking aloud, a process to which others may subsequently contribute, the result of which raises the overall level of social intelligence. The sort of people I have in mind – say, Alan Dershowitz, Bjørn Lomborg, Richard Dawkins – most genuinely embody the spirit of intellectual responsibility. And I would add to this list even more reviled figures, including many Nazi revisionists, eugenicists, racists and Creationists. To believe that society needs to be protected from the views of these people is to concede that it has not earned the right to intellectual freedom.

Consider so-called Holocaust Denial – the hypothesis that the Nazi maltreatment of Jews in World War II did not amount to genocide. The hypothesis is very likely false, yet it deserves to have its strongest version subject to critical scrutiny. Like so many hypotheses of this kind, its falseness is most evident when taken as literally as its advocates would have us do. However, the effort we expend to falsify these hypotheses forces us to turn a diagnostic eye on the *de facto* limits we place on ‘free inquiry’ in the name of ‘political correctness’. After all, the ‘six million Jews’ figure was originally advanced as a back-of-an-envelope estimate during the 1946 Nuremberg Trial. Normally a figure constructed under such politicized circumstances would be hotly debated, if not treated with outright scepticism. At the very least, researchers with cooler heads in later years would be expected to raise or lower the figure as they weighed the evidence.

Holocaust deniers make much of the fact that these norms seem to be suspended, or at least attenuated. It is important to understand why they may be right on this point, even if their overall case is wrong and perhaps even malicious. It goes to why ‘intellectual freedom’ makes no sense other than as a generalization of academic freedom. A society that genuinely enjoyed the freedom we protect in academia would publicly disaggregate various Nazi activities and judge them each on their own terms, questioning whether they need to be bundled with the heinous activities historically associated with them (Fuller 2006a: chap. 14). Thus, we should be able to conclude – without fear or loathing – that Nazi sympathizers, regardless of their ulterior motives, deserve credit for, say, sensitizing us to how our desperation for clear moral benchmarks compromises our critical capacities.

Would our moral outrage be diminished, were we to learn that the Nazis exterminated only 6000 rather than 6,000,000 Jews? Perhaps – especially if one did not trust the maturity of our collective moral judgement. Traditionally children and primitives had to be regaled with exaggerated accounts of unspeakable evil out of fear they would not otherwise do good. The Enlightenment was all about escaping from this state of ‘nonage’, as Kant put it in his signature essay on the movement. He wanted people to be legally

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recognized as adults empowered to discuss and decide matters for themselves through public deliberation. However, Kant's most politically effective follower, Wilhelm von Humboldt, realized that this Enlightenment ideal required an institutional vehicle through which all of society may be slowly but surely encompassed. With that in mind he invented the modern university.

However, so far I have been dwelling on 'academic freedom' as if it referred solely to freedoms enjoyed by professional academics. However, that is only half of the concept – and not necessarily the half that has been historically dominant (Metzger 1955: 123). Humboldt's conception of the modern university incorporated the original medieval idea that both students and faculty are citizens of the university with complementary rights and obligations that must be maintained together. The justification for what the Germans called the freedom to learn (*Lernfreiheit*) as distinct from the freedom to teach (*Lehrfreiheit*) drew on the university's historic rootedness in the guild idea of transmitting an intrinsically worthy form of knowledge (*universitas*), coupled with a more modern *Bildung*-based concern to provide a space that allows the individual to mature and flourish. All learners are effectively apprentice teachers who should be respected as such – what social psychologists nowadays call 'legitimate peripheral participants' (Lave and Wenger 1991; cf. Fuller 2000b: 130).

Max Weber's speech to postgraduate students 'Science as a Vocation' (1958) offers a justly famous insight into this matter. For Weber, academic integrity requires that the classroom be policed so that the teacher's rights do not supervene upon the learner's, which would mark the illegitimate slide of science into politics. Weber observes that one important way students exercise their freedom to learn is by choosing which lectures to attend, which means that some teachers get many more students than others. This especially applies to academic systems (e.g. Oxbridge) that clearly distinguish the roles of lecturer and examiner, so that students in principle can pass a course without ever attending the corresponding lectures. While Weber found such nascent academic consumerism distasteful, he nevertheless accepted it as an implication of student's freedom to learn. However, what he did not accept was the idea of teachers catering to this tendency. He would thus oppose the use of student enrolments as a criterion for awarding tenure and promotion. In other words, he wanted to give space to the freedom to learn without contaminating the space for the freedom to teach – and vice versa, for which Weber's speech is better known (i.e. that teachers should reveal their biases in weighing the evidence and present opposing opinions fair-mindedly).

Were Weber alive today, he might argue that if there is sufficient student interest and university resources, students are entitled to courses in non-standard and even countercultural topics like Hospitality Management, Sports and Leisure Studies, Astrology and Creationism. After all, courses on heterodox topics historically entered the university curriculum through self-organizing reading groups of students, with or without faculty sponsorship, for which students then sought formal academic credit. If the interest continued across several cohorts of students, there would be

grounds to petition the university to establish a regular academic line on the topic. However, this prospect should in no way influence judgements of the tenure and promotion of current academic staff, which should be based on the candidates' claimed fields of academic competence. Of course, any university wishing to maintain the delicate balance between *Lehrfreiheit* and *Lernfreiheit* would need a business plan, if not a more formal legal mechanism, for ensuring that student demand does not swamp teacher supply or vice versa.

Enter self-styled US academic freedom campaigner David Horowitz, 1960s student radical turned neo-conservative champion of 'student rights', most notoriously through the promotion of an 'Academic Bill of Rights'. While Horowitz is widely reviled by professional American academics for his list of the '100 most dangerous professors' (Horowitz 2006), he is treated more respectfully in Germany (Schreiterer 2008). With titles like 'Indoctrination U.' (Horowitz 2007), Horowitz's aims to change the minds not of the academics themselves but of students, their tuition-paying parents and alumni. Often working with student unions and alumni associations, Horowitz encourages more detailed, content-driven student evaluations of courses than are normally used for tenure and promotion purposes. In response to claims by academics that they already protect the student's freedom to learn by appearing liberal in the classroom, Horowitz argues that such claims should be taken as seriously as corporate public relations claims that big business spontaneously produces goods with the consumer's best interests in mind. Thus, as consumers had done in the 1960s, students now need to stand up for their own rights so as not to be force-fed inferior knowledge products from unscrupulous academics – with Horowitz kindly offering his services as the would-be Ralph Nader of academia.

US academia finds itself in the awkward position of having to take seriously someone like Horowitz because the most venerable US professional academic organization, the American Association of University Professors (AAUP), founded in 1915 by the philosophers John Dewey and Arthur Lovejoy, has been almost entirely devoted to protecting the freedom to teach and research, but not the freedom to learn. The AAUP adapted elements of the more complex German notion of academic freedom to prevent the arbitrary dismissal of controversial and otherwise unconventional academics, typically at the behest of senior university administrators, boards of trustees, state legislatures and, yes, students and their parents, who were often the source of alumni donations. Unsurprisingly, AAUP has acquired the self-protective character of a labour union that has endeavoured to tie the idea of academic freedom quite exclusively to disciplinary expertise, understood in strict guild terms as the entitlement of a mature practitioner to secure employment beyond a legally fixed probation period. Especially in times when universities must raise tuition fees to make ends meet, this strict interpretation of academic freedom as lifelong tenure can be easily cast in a negative light as 'featherbedding' or 'rent-seeking'.

## The Place of Intellectual Life

Sociologically speaking, in the US context, neither a students' rights activist like Horowitz nor the avowedly liberal AAUP is in an especially good position to address the animus informing *Lernfreiheit*. For its part, the AAUP problematically treats universities not as organizations with ends of their own, such as the provision of liberal education, but merely as sites for the reproduction of various disciplinary expertises, on behalf of which universities are made to maintain adequate work conditions for appropriately certified disciplinary practitioners. To anyone other than a professional academic, this is an incredibly self-serving way to think about a university. Nevertheless, Horowitz errs as well in thinking that the freedom to learn is something easily resolved in a single classroom by altering teaching practice. On the contrary, as Horowitz's critics rightly point out, that would be to interfere with *Lehrfreiheit*. However, academics do have a responsibility to ensure that procedures are in place for students to organize their own courses and petition for new subjects to be taught. That takes up the challenge of *Lernfreiheit* much more robustly than adopting a superficially liberal, but ultimately patronizing, attitude towards the students' cultivation of their own intellectual interests.