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# Virtual(ly) Universities? An Examination of Two Digitally Contextualised 'Universities'

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### ABSTRACT

This paper considers how the traditional liberal university and, indeed, civil society are fundamentally changed by a semantic recasting of what constitutes 'knowledge' in an information age. Specifically, it will examine two relatively recent examples of digitally contextualised university structures, the Universitas 21/ Thomson Learning joint venture and the Malaysian Multimedia University (MMU). This is undertaken in the light of Jean-François Lyotard's prophetic work on techno-science, performativity and global capital renewal.

## Introduction

The ruptures and changes in modern society in the post war period have been assessed by 'technology hawks' such as Alvin Toffler and Daniel Bell (Henderson, 1996), as well as by the more cautious 'technophobes', Alain Touraine, Theodore Roszak, Ivan Illich and Krishan Kumar (Peters, 1997). This work, emerging in the late sixties and early seventies, characterised a shift to post-industrialism and the 'information society'. The labels symbolise a supposed break with old class alignments, an economics of scarcity and the Fordist mode of production, and a recognition of what have become the main principles of technological societies: "knowledge, personal services, file electronic technology of computers and telecommunications" (Kumar, 1978 in Peters, 1997: 227).

Through Badham (1986), Michael Peters (1997) elucidates two key strands of post-industrial theory (as opposed to critique). The first is the centrality of the university and the generation of theoretical knowledge in the new system of production. In line with this appraisal is the growth of "...new knowledge classes, [the] so-called scientific-technological elite" (Peters, 1997: 229). Universities are required by national governments and particularly multinational companies as producers of human capital or 'knowledge (able) workers'. Universities are also key sites (along with private and public research centres) for the production of 'useful knowledge', knowledge which can be utilised to fuel the globally competitive market place.

Peters' (1997: 230) second observation is that the foundation of the intellectual origins in post-industrial theories lies" ... in one strand of nineteenth century thought - the form of empiricism inaugurated by Saint-Simon, Compte and Spencer ..." Significantly, Peters sees this empiricism as the historical forerunner of techno-science, the current driver of postmodern economies. He therefore assesses the 'technophobe' critique as a deeper critique of European rationalism: " ... what I want to call the critique of post-industrialism is, in essence, a critique of Western rationalism - of a universalist reason - which encompasses theories of industrialism as much as theories of post-industrialism" (Peters, 1997: 229). From this argument we can see that the dominance of techno-

science in the late twentieth and early twenty first centuries, very explicitly links current globalising (English/Western) discoursal labels calling for all countries to strive towards the development of the utopian Knowledge Society, with Enlightenment positivism. As Steve Fuller (1997: 76) observes:

> ... it is truly perverse of celebrants of the Knowledge Society to declare that humanity is on the threshold of a new conception of knowledge that will have to be evaluated on its own emerging terms. After all those terms emerged long ago, but are now only fully realisable. They can be summed up in the word Positivism: industrial society's final frontier.

## Lyotard and techno-science

In 1979, Jean-François Lyotard produced a piercing analysis and prophecy of this changing status of knowledge and technology in advanced, computerised societies, relating this to the question of the underlying "crisis of legitimation" in the West, which he maintained had been evolving since the nineteenth century. Lyotard (1979/ 1984) explains that this demise is closely connected to the end of any former consensus gained through Science and its legitimating discipline of philosophy. He named this rupture in the projectile of Western 'progress', as the "postmodern condition". He saw it not as something that came after modernity but as a deeper interrogation of modernity itself as well as a recovery of the deep memories which modernity had forgotten. William Bain (1995), referring to Lyotard's *The Postmodern Explained to Children* describes it this way:

> It (postmodernism) ... is not a wholesale rejection or a totalizing critique. It is not a radical overcoming ... but rather a transformation, a working through ... the conceptual and institutional apparatuses of modernity. It is also a remembering, a recollection ... of the presuppositions and forgettings that modernity cannot or will not face (Bain, 1995: 9).

For Lyotard the postmodern is always part of the modern, always the beginning of the modern, always a different way of interpreting the modern.

Techno-science is the term employed by Lyotard (1984) to depict the language game dominating societies contextualised by computerisation. Lyotard (1984: 41) observes two major changes in the nature of scientific research for these societies: " ... a multiplication in methods of argumentation and a rising complexity level in the process of establishing proof". In his analysis, the splintering and concomitant multiplicity of the language games of science (and science is revealed as just one language game among many) mean that there is no one way or language with which to discuss and therefore understand all these things. Moreover, because the human senses have for some time been inadequate to the intricacy of the task of establishing proof (accurately observing and recording the results of a scientific experiment), the linkage between science and technology has become inextricable. Technology is required to establish 'good' proof and technology costs money: "No money - no proof - and that means no verification of statements and truth. The games of scientific languages become the games of the rich, in which whoever is the wealthiest has the best chance of being right. An equation between wealth, efficiency, and truth is thus established" (1984: 45). Unlike the game of science that had 'truth' as its goal, the new lexical configuration, techno-science, is governed by the technological imperative of efficiency, the need to gain higher and higher performance from the system.

Knowledge that is valued in advanced technological, scientised societies, then, is a certain type of knowledge, techno-scientific knowledge. Value (able) knowledge will be knowledge which is 'useful' and 'relevant' (not just knowledge for its own sake), most often this will be knowledge which can turn a profit, through 'making a new move' or more rarely, 'establishing new rules'. Lyotard notes that there are: " ... a certain set of prescriptions determining which statements are accepted as 'knowledge' statements" (1979: 4). These "prescriptions" in the current context are that knowledge, if it is to 'count' will advance global, national and local economies, attract multinational corporations to the human resources in a particular locality. Generally, knowledge ensures that the society (or even the institution) in question is digitally and economically connected to the world's most

powerful centres, that it is not rendered irrelevant and impotent by global capital and media flows. Better still, it would be the case that knowledge captures these flows and actually makes money out of them. Lyotard (1979) began to map out *how* knowledge was being rearranged, transmogrified, in order to find the new moves, the new efficiencies, citing for example, the rise of cross-disciplinary studies in the universities, and the closer links between private and public research teams.

Gibbons, Limoges, Nowotny, Schwartzman, Scott and Traw in their 1994 publication, *The New Production of Knowledge,* further explore the properties of 'new' knowledge. They distinguish between a traditional mode of knowledge production which is generated within a disciplinary context - Mode 1, conventionally regarded as 'scientific knowledge' produced by scientists, "Its ideal is Newtonian and mathematical physics" (Gibbons *et al.,* 1994: 2), and Mode 2 knowledge, which is transdisciplinary and carried out only in the context of application. They contend that Mode 2 knowledge production is about much more than producing knowledge 'for the market'. They say:

> ... knowledge production in Mode 2 is the outcome of a process in which supply and demand factors can be said to operate, but the sources of supply are increasingly diverse, as are the demands for differentiated forms of specialist knowledge. Such processes or markets specify what we mean by the context of application. Because they include much more than commercial considerations, it might be said that in Mode 2 science has gone beyond the market. Knowledge production becomes diffused throughout society. This is why we also speak of socially distributed knowledge (Gibbons *et al* 1994: 4).

They also note that *knowledge* and *science* have traditionally been used as synonyms or collocated into *scientific knowledge.* They suggest that Mode 2 invites a wider interpretation of knowledge and embraces the humanities that share many characteristics with it. Reflexivity and social accountability, for example, are integral, they contend, to both. In Mode 2:

> Reflection of the values implied in human aspirations and projects has been a traditional concern of the humanities. As reflexivity within the research process spreads, the humanities too are experiencing an increase in demand for the sorts of knowledge they have to offer (Gibbons *et al.,* 1994: 7).

Tim Luke (1998), while affording use of Gibbons *et al.* categories, follows and advances Lyotard's (1984) argument that this new post-seventies type of knowledge production is not necessarily the utopian answer to current 'problems' that Gibbons *et al.* imply. Luke sees Mode 1 tied firmly to the *bricks and mortar* liberal university institution and traditional notions of a 'liberal education'. He resolutely posits Mode 2, socially distributed knowledge, as *performative knowledge,* knowledge which gains power and profit; knowledge which groups and then reconfigures, often digitally, in order to follow the funding to solve the problems which will provide the competitive edge in a global input/ output matrix. In Lyotard's (1984: 11) words: "The true goal of the system, the reason it programmes itself like a computer, is the optimisation of the global relationship between input and output - in other words performativity".

Performativity in a computerised context is Capital's path to power. Through financing the technology to produce the best 'proof ' and therefore the best 'truth,' Capital self-legitimates itself Moreover the truth/proof/performativity criterion obviously extends to the law: "the probability that an order would be pronounced just was said to increase with its chances of being implemented, which would in turn increase with the performance capability of the prescriber" (Lyotard, 1984: 46). And, importantly:

> Power is not only good performativity but also effective verification and good verdicts. It legitimates science and law on the basis of their efficiency, and legitimates this efficiency on the basis of science and law. It is self-legitimating, in the same way a system organised around performance maximisation seems to be. Now it is precisely this kind of context control that a generalised computerisation of society may bring. The performativity of an utterance, be it denotative or prescriptive, increases proportionally to the amount of information about its referent one has at one's disposal. Thus the growth of power and its self-legitimation, are now taking the route of data storage and accessibility, and the operativity of information (Lyotard, 1984: 47).

The role of higher education in a society which identifies information as the mode of production, is central, but as Lyotard contends, different from its former responsibility of building character/ minds through the acquisition of knowledge. The point of higher education becomes optimising the system's performance through global competition, at the level of the corporation, the nation state or as we have seen since the nineties, the educational institution itself.

Two quite different examples of how university institutions have been reconceived to service digitised capital and its quest for new knowledge commodities are the Malaysian Multimedia University and the Universitas 21 joint venture. The latter, which will be addressed first, was initially linked up with Rupert Murdoch's News Corporation but has more recently dropped this connection in favour of a union with Thomson Learning.

## Universitas 21

Universitas 21, as its press release states, is:

> ...a company incorporated in the United Kingdom with a membership network of 18 universities in 10 countries. Collectively, it enrols about 500,000 students a year, employs some 44,000 academics and researchers and has a combined operating budget of almost $US9 billion. The company's core business is the provision of a pre-eminent brand of educational services supported (by) a strong quality assurance framework. *Universitas 21* is working to secure international professional accreditation and portability for core *Universitas 21* curricula in key professional areas (Universitas 21, 2000a: 2).

As the language in the press release unequivocally asserts, the organisation is a large multinational business intent on securing the world market in educational 'services'. On the 16 May 2000, Universitas 21 signed an agreement to form a joint venture company with TSL Education Ltd, the wholly owned subsidary of Rupert Murdoch's News Corporation, itself one of the world's largest media conglomerates. In the words of Professor Alan Gilbert, Vice Chancellor of Melbourne University and chairman of Universitas 21: "My colleagues and I in Universitas 21 welcome the prospect of working with News Corporation to provide innovative, high quality educational choices to people around the world for whom e-education is either becoming the preferred option or remaining the only opportunity for access to the knowledge age and the information economy" (Universitas 21, 2000a: 1-2).

In the *Listener* an article discussing the concerns of University of Auckland academic staff with their University's part in Universitas 21 enumerates the following objections to the consortium as it stood with Rupert Murdoch (Philp, 2000):

1. Rupert Murdoch's 'editorial line' of 'dumbing down' content it the media.

2. His 'long-standing contempt for the free flow of ideas'.

3. Murdoch's poor track record as a corporate citizen and his reputation for tax evasion.

4. Possible loss of control over intellectual property.

5. Possible loss of academic freedom.

6. The potential for having to amend accreditation procedures to meet marl<:eting demand.

While the Universitas 21/ News Corporation link-up was soon dropped in favour of a more palatable digitally networked corporate partner, Thomson Learning, the aim is still a digitised global higher education monopoly. As Wayne Hope (1998: 4) observes: " ... digital advances have precipitated mergers, acquisitions, strategic alliances, and commercial 'synergies' throughout the entertainment-publishing-telecom-personal computer sectors". These convergences now clearly include education.

While Thomson Learning does not seem to attract the same vitriol on the internet as Murdoch's News Corporation and indeed looks to be a model corporate partner, its attitude to higher education and learning is shaped by an underlying understanding of higher education as a privately owned, globally portable product. The agreement with Universitas 21 is proof, not of Thomson Learning's commitment to quality, diversity and equity in higher education, but instead, according to Bob Christie, president and CEO of Thomson Learning, it is proof of the company's "commitment to ... growing our presence in the global electronic learning area" (Universitas 21, 2000c: 2).

Thomson Learning describes itself as among the world's preeminent information businesses, one of the world's " ... leading providers of lifelong learning information" (Universitas 21, 2000c: 2). The company is a part of The Thomson Corporation which, in 1999, boasted revenues in excess of $5.8 billion. The Thomson Corporation is listed on the Toronto and London stock exchanges.

A search of Thomson Learning's website (www.thomsonlearning.com) revealed that the company's primary business is upskilling a range of professionals in computer skills of various types and dealing in educational publishing activities. It is perhaps surprising, therefore, that the partnership is organised on the basis of Thomson Learning being responsible for the course design, content development, testing and assessment, student database management and translation for the project, while the Universitas 21 network will only award the degrees, diplomas or certificates. Universitas 21 effectively provides a shell structure giving "powerful international brand, credible quality assurance, and multi-jurisdictional certfication" (Thomson Learning, 2000: 1). While students will be led to believe through the branding and advertising that they are getting a digital form of genuine university education, they will actually be getting no such thing.

Mergers like the Universitas 21/ Thomson Learning partnership, if successful, will have a significant impact on the way knowledge is constructed and conceived across different countries and cultures. Significantly, e-education soon represents and becomes synonymous with the dominant trade languages of Mandarin, Spanish and particularly English (McCarthy, 2001). Since language carries culture, learning through a restricted language or number of languages significantly narrows the kind of things that can be taught, researched and learned across the world. In addition, people spend inordinate amounts of time learning the target language instead of acquiring other types of knowledge (Pennycook, 1994).

Another threat to a diversity of knowledge production is a tendency towards global standardisation of courses and delivery. Maximum profits can be gained through offering a restricted number of standardised, popular courses to as large a population of learners as possible (Thomson Learning refers to them as customers). Accordingly, Universitas 21 and Thomson Learning will be initially offering masters degrees in business administration and information systems (McCarthy, 2001). These fields of learning have clearly been chosen for their fit with current Thomson Learning corporate experience, their perceived professional credentialisation value and their apolitical flavour. Since the initial major markets for the degrees are Asia and South America (McCarthy, 2001), areas dominated by politically restrictive and in some cases repressive regimes, the apparently politically 'neutral' nature of the degrees will facilitate their uptake and any political authorisation that may be required.

Cunningham *et al.* (2000) point out the glaring paradox of corporate, virtual and for-profit universites. While these organisations would purport to be post-Fordist in their activities (given their reliance on new media and their supposed ability to deliver 'new types of education'), the unbundling and consequent specialisation of much of the academic work that is involved in delivering education and training efficiently across the net can be characterised as a Fordist division of labour. They write:

> ... [the] disaggregation *of* the traditional teaching role to accommodate the increasingly specialised demands of high-technology delivery and centralised curriculum, means that staff functions are distinguished by specialisation into curriculum developer, designer, deliverer and technician, as well as marker, and, in addition marketer ( Cunningham *et al.,* 2000: 117).

With no national space or cultures to represent and be responsible for, no critic and conscience role of society to uphold, no public good to protect, the global flows of education can concentrate on the teaching and learning of 'for-profit knowledge'. Under these circumstances Lyotard's words take on a certain predictability:

> The relationship of the suppliers and users of knowledge to the knowledge they supply and use is now tending, and will increasingly tend to assume the form already taken by the relationship of commodity producers and consumers to the commodities they produce and consume - that is the form of value. Knowledge is and will be produced in order to be sold, it is and will be consumed in order to be valorised in a new production: in both cases, the goal is exchange (Lyotard, 1984: 4).

Jane Kelsey (2000), in a keynote address to the Quality Public Education Conference, questioned the New Zealand Labour Government's ability and understanding to redirect the New Zealand higher education system as a medium for nation building after fifteen years of market hegemony. The acceptance of the Universitas 21 link up with Murdoch or Thomson Learning in the interests of institutional power and capital building, along with active promotion of the international trade in tertiary students and tertiary education 'products', suggests that tertiary education *is* seen as an export commodity rather than a mode of creating well educated New Zealand citizens and workers. How the two can sit comfortably alongside each other has never been articulated or even raised as an obvious tension in public discourse in New Zealand.

While detracting from any residual nation-building focus Universitas 21 member universities may have, in the interests of higher pay-offs in foreign markets, the new global joint venture has the potential to curtail national sovereignty and subvert tertiary education, 'nation building' initiatives in buyer nations and regions. Those who can pay opt out of national institutions in the convenience of their own home, to take up more prestigious, costly and often inappropriate Western alternatives over the world Wide Wide Web. The unsuitability of Western models of education and knowledge for many countries in the world is referred to, for example, by writers like Altbach (1981) who notes how poorly India has been served by its English medium and Western educated elite.

Cunningham *et al.* (2000) have observed that the rhetoric of virtual universities attempting to go global has so far exceeded the realities. They believe, however, that the sector is in its very early stages and existing organisations may be on the cusp of considerable expansion.


## Malaysia Multimedia University

In contrast to the global Western-dominated Universitas 21 /Thomson Learning venture, the Malaysian Multimedia University (MMU) is a Malaysian government university established with the explicit purpose of supporting the government initiated Multimedia Super Corridor (MSC) located between Kuala Lumpur and KL International Airport. The Multimedia Super Corridor (MSC) is Malaysia's flagship development through which it hopes not only to join but" ... achieve leadership" (Multimedia Development Corporation, 2000: 1) in the Information Age. The official website describes Cyberjaya, the urban science park of the MSC as," ... ah intelligent city with multimedia industries, R&D centres, a Multimedia University and operational headquarters for multinationals" (Multimedia Development Corporation, 2000: 2).

The MSC on its official website is depicted, (no doubt unwittingly) as a charicature of some futuristic digitally and entrepreneurially dominated cultural space that places Malaysia at the head of a world race to prosperity. The commentary observes:

Set to deliver a number of sophisticated investment, business, R&D and lifestyle options, the MSC will be:

- A vehicle for attracting world-class technology-led companies to Malaysia, and developing local industries.

- A Multimedia Utopia offering a productive, intelligent environment within which a multimedia value chain of goods and services will be produced and delivered across the globe.

- An island of excellence with multimedia-specific capabilities, technologies, infrastructure, legislation, policies, and systems for competitive advantage.

- A test bed for invention, research, and other ground-breaking multimedia developments spearheaded by seven multimedia applications.

- A global community living on the leading-edge of the Information Society.

- A world of Smart Homes, Smart Cities, Smart Schools, Smart Cards and Smart Partnerships .

The Multimedia Development Corporation envisions a twenty-year time-frame for the full implementation and execution of the MSC, when Malaysia will have achieved leadership in the Information Age (Multimedia Development Corporation, 2000: 2).

Castells and Hall (1994) have employed the French word *technopole* to describe what they say are the new coal mines and foundries of the informational economy, the planned developments which sometimes go by the names of science parks, techno-industrial complexes, science cities and the like. As Castells and Hall ( 1994) point out, universities are crucial, to these developments, as they generate applied and basic new knowledge, they provide the training of a local labour force of new scientists, engineers and technicians and may engage in a direct entrepreneurial role (such as Stanford or Cambridge) in supporting and promoting the marketisation of their research through business ventures or joint ventures with industrial companies.

Cyberjaya and the MSC are supported by the Malaysian Multimedia University (MMU), a national university divided into two campuses - Melaka and Cyberjaya. The university, as its name suggests, is devoted to the development of multimedia. The Cyberjaya campus includes the Faculties of Creative Multimedia, Engineering, Information Technology and Management. The Melaka campus includes the Faculties of Engineering and Technology, Information Science and Technology, and Business and Law. The disciplinary spread over the university is considerably restricted when compared to traditional universities, concentrating instead on the broad areas of digital techno-science and business.

This narrow faculty structure appears to bracket out knowledge which will not explicitly and quickly lead to market outcomes as well as knowledge capable of critiquing those outcomes. Just one example of this is the type of research that characterises the Centre for Multimedia Communications in the Faculty of Engineering at MMU.

The Mission of the Centre states:

To promote and lead research and development, technology transfer and training of R&D manpower in specific areas of communications technologies so as to help enhance the competitiveness of local industries in global markets (Malaysia Multimedia University, 2000: 1).

The Centre very specifically details its relationships and obligations and these are couched primarily in terms of increasing institutional power and capital (Malaysia Multimedia University, 2000: 2), providing manpower training for industry and developing knowledge directly for private capital uptake. The clearest examples of the latter are in the list of research projects being undertaken by the Centre and the identified beneficiaries for the research. For example, the "Enhanced Data Rate for Global Evolution (EDGE) for GSM System" is projected to benefit mobile phone providers. The "Video Compression Algorithm Development for Mobile Communications" project is for Motorola Technology; "A study on RF Signal Propagation in an Indoor Environment for Wireless Communication Applications" is for mobile service providers and wireless computer networking companies. And "VLAN Protocol: Issues Design and Implementation" is for companies dealing with VLAN hardware and software.

Perhaps it is significant to note that such a narrowly conceived university structure as MMU, as well as the concept of the MSC generally, was the brain -child of Dr Mahathir Mohamad, Prime Minister of Malaysia for two decades. As one commentator has noted "Mahathir is not a democrat at heart" (Kuppuswamy, 2000: 1), the Anwar Ibrahim case being the most well publicised case of a string of human rights abuses committed by the Malaysian Government. In such an environment useful knowledge is apparently non-political, so-called neutral knowledge that will support capital and the incumbent powers reliant on that capital. In fact as Foucault and Lyotard have taught us, knowledge and power are intertwined and interdependent. No knowledge is disinterested and neutral and it is precisely the non-critical, techno-scientific nature of the knowledge generated at MMU that supports the current political power in Malaysia.

The use of 100% English on the MSC website (see www.mdc.com.my) as well as the language of instruction at MMU is significant. Following post war independence and the development of a Malay middle class, Mahathir Mohamad was elected to power in 1981 on a platform of Malay nationalism. His affirmative action Bumiputra policies included replacing the dominant position of English (a direct result of colonisation by Britain) with Bahasa Malay (Pennycook, 1994). In the nineties, however, the international and "neutral" language of English is seen _as a necessity by some for connectedness to the developed/Western world of business, higher education, science and technology. At the same time, others continue to cite the historical implicatedness of English in Malaysia's colonisation (Pennycook, 1998) and the continued importance of the national language for identity and national well being. One Malaysian citizen wrote to *The New Straits Times* in 1990: "There is nothing that the English language can do for us in terms of modernising our minds if its role is conceived merely, as we do now, in terms of understanding instructions from our factory bosses on the factory shop floor" (cited in Pennycook, 1994: 219). One might argue that the point of English as the language of instruction in new universities like MMU is precisely to enable Malaysian students to be more attractive to employees for predominantly English speaking multinational high tech companies (the new 'factories').

Mahathir's choice of English as the dominant language in his utopian MSC for pragmatic, scientific, academic, business, and political reasons, in other words for power and efficiency (of communication - with predominantly English speaking multinational companies) appears to situate English as the global language of performativity, the language necessary for the efficiency of the global, digitalised capital input output system.

The MMU phenomenon, then, championed by a political structure intolerant of oppositional points of view with its pared down faculty structure, Centres of Excellence and focus on for-profit knowledge generation can be summed up by Tim Luke as follows:

... the promise of merchandisable science, research parks, or corporate contracts all provide ample rationale for making most new investments in colleges of business, engineering or applied science as 'centres of excellence'. In deciding between the liberal tradition of culturally concentrated knowledge with its grounding in *Bildungsphilosophie* or the modern economy of socially distributed knowledge with its networks of performativity, the economy continually trumps tradition (Luke, 1998: 53).

## What are the stakes?

As, Butterworth and Tarling (1994) have pointed out, universities have always survived through adaptation. But we have to ask whether the Universitas 21 model of prepackaged, privately owned, to-the-world, digitally delivered education or the State-designed, narrow, techno/scientific, digitally dominated? disciplinary structure of MMU are purposeful models through which to pursue a" ... common commitment to rational enquiry, and through it to the creation, advancement, preservation and application of knowledge" (Gilbert, in Luke, 1998: 69).

The two cited examples clearly embody the foreboding in Jameson's foreword *to The Postmodern Condition:*

> The moment of truth ... comes when the matter of the ownership and control of the new information banks - the profitability of the new technological and information revolution - returns ... with a vengeance: the dystopian prospect of a global private monopoly of information weighs heavily in the balance against the pleasures of paralogisms and of 'anarchist science' (Jameson, 1984: xx).

This moment of 'truth' envisages everything as measured, everything as managed, knowledge as a privately owned commodity, as power is accrued in direct relationship to the amount of knowledge accumulated. At the end of *The Postmodern Condition,* Lyotard (1984) realistically points out that there is no 'pure alternative' to this totalising metanarrative of performativity underscored by digital developments. There are, however, smaller ways around it and through it. He renovates postmodern science, with its search for instabilities and paradox, and elevates the possibilities of the 'temporary contract' for its ambiguities and inability to be totally subordinated to global capital. His aim is to work towards a politics based not on efficiency but on " ... justice and the desire for the unknown" (Lyotard, 1984: 67). Tim Luke (1998) further notes that the changes to traditional liberal university structures as described above are not preordained. People have choices: choices to talk back within their university structures, not to work in hollowed out university shells, to insure that their educational work amounts to more than the churning out of knowledge service workers and products. Luke (1998: 70) writes:

> Whatever happens, universities should not forsake their historic Mode 1 knowledge production and consumption functions ... No one familiar with the corporate culture of Disney, Sony or AT&T (and News Corporation) really can believe that they would preserve and protect free rational enquiry in the same way as most universities. The virtual universities that such mega corporations might build would, only be 'virtually' universities, providing what is at best only seemingly real education or apparently substantial research rather than providing something of enduring value. Universities must be more than shell buildings for the knowledge business ... The traditional roles of the university as a knowledge collector/preserver/interpreter/protector should, and can be, performed virtually, but not all of these functions will be very profitable functions for the 'knowledge business'. Consequently, a virtual university must adapt its discourses and disciplines to these digital domains and continue its familiar Mode 1 missions without becoming only virtually a university hustling with everyone else in the Mode 2 knowledge trade.

## Conclusion

Widespread and growing recognition of the substantial economic externalities from university education is driving both corporate and government interest and investment in the sector. In addition, global rebranding of industrial nations as knowledge economies and societies, however ill-defined and unanalysed these labels may be, further fuel an understanding of university education as digitally contextualised, corporatised in the service of business and potential profit makers. Digital developments and concomitant corporate synergies have brought the prospect of global university monopolies much closer to reality. They have also underpinned nationalistic utopian planning for high-tech zones designed to attract multinational companies. Universities, in this context, are seen more as high-powered research, development and training centres than places where citizens are educated to take part in civil, democratic life.

This paper has suggested that the nexus between digitalisation and the university needs to be rigorously problematised. The prospect of politically neutral, mostly English language, business and technoscience education saturating the planet in the interests of further regenerating the capitalist system is not attractive and, indeed, holds the seeds of widespread cultural if not planetary destruction.

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