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18 Knowledge beyond the knowledge economy

Merely cultural? Merely commercial? Merely civilizing?¹

Johannah Fahey, Jane Kenway, Elizabeth Bullen and Simon Robb

Introduction

Every presence defines an absence. When knowledge economy policies define worthwhile knowledges, they leave out those knowledges deemed marginal to current economic growth. They legitimise particular kinds of knowledge whilst ignoring and thus diminishing others. Further, knowledge economy policies seek to determine and control the flow of knowledge and the manner in which it is communicated (Kenway et al. 2004; Bullen et al. 2004a). Typically, cultural economies and the aesthetic, and by implication arts and humanities disciplines and other knowledges associated with them, are a major absence. They are regarded as incommensurable with the dominant techno-economic paradigm.

Policy conceptualisations of the global knowledge economy have led to the channelling of much research funding into the priority areas of science and technology (Kenway et al. 2004a). This policy steering by global policy agencies and diverse national governments around the world raises questions about the future foci, directions and indeed survival of humanities and creative arts faculties and fields in universities – particularly as they have traditionally been conceived. How these faculties and the different disciplines within them might best respond to knowledge economy policies is therefore a question of importance, although one that is yet to be adequately answered. This chapter seeks primarily to contribute to the discussion and debates (see further Kenway et al. 2004) and secondly to suggest some implications of this debate for educational research and thereby to assist educational researchers to consider similar issues.

In the first part of this chapter we will show how one university arts faculty actively engages with and contests the manner in which knowledge economy policies are typically theorised, particularly with regard to innovation. We suggest that this faculty’s approach is a significant advance on conventional ‘culture free’ notions of the knowledge economy. However, drawing on Jean-François Lyotard’s critique of knowledge in contemporary society, in the second part of the chapter, we raise some questions about the approach developed by this particular faculty and by implication other similar approaches. In the final section, we seek to advance discussions about the role and value of the humanities and creative arts by drawing on Lyotard’s notion of the ‘libidinal economy’. In the libidinal economy the radical potential of aesthetic knowledges can be understood as valuable creative forces operating against the techno-economic limits placed on
knowledge by policy. We conclude by drawing out some of the implications of this line of analysis for educational research. To pursue our overall argument we draw on interdisciplinary research conducted under the rubric of aesthetic knowledge. Overall, this chapter highlights some ways to enrich understandings of the role of the humanities and creative arts in theorisations of the knowledge economy.

**Merely cultural?**

The Organization for Economic Cooperation and Development’s (OECD) landmark document on the knowledge economy argues that ‘in the long run, knowledge, especially technological knowledge, is the main source of economic growth and improvements in quality of life’ (OECD 1996: 13). Culture is seen to have little or no connection to economy. Such views are evident in ‘Backing Australia’s Ability’, the Australian government’s major innovation policy ensemble introduced in 2001. *Backing Australia’s Ability – Building our Future through Science and Innovation* is the most recent Australian science and innovation package totalling a commitment of $5.3 billion over seven years from 2004–05. This package builds on the initial 2001 *Backing Australia’s Ability: An Innovation Action Plan for the Future* investment of $3 billion over five years to 2005–06. Together these packages constitute a 10-year, $8.3 billion funding commitment stretching from 2001–02 to 2010–11. *Backing Australia’s Ability* represents a commitment to pursue excellence in research, science and technology, through three key themes: the generation of new ideas (R&D); the commercial application of ideas; and developing and retaining skills (Commonwealth of Australia 2004). This innovation agenda privileges techno-scientific orientations to research.

In Australia, this set of policies provoked considerable disquiet amongst the arts, humanities and social sciences communities. For example, in her National Press Club address of 2001, Dr Margaret Seares (Chair of the Australia Council) spoke of the ‘benign neglect’ (2001: 1) of the arts in Australian public policy, stating:

> We should take note that there is no reflection in the ‘Backing Australia’s Ability’ document – the major innovation policy statement – of the close interconnection that exists between culture, creativity, and innovation. And, in all the discussion that has followed there has been no reference to the potential role of the cultural industries in developing and enhancing Australia’s innovation effort.  

*(Seares 2001: 3)*

Seares contrasts this ‘neglect’ of the arts in Australian public policy with the British Labour Government’s Green Paper of 2001, *Culture and Creativity: The Next 10 years* which acknowledges the significant role played by culture and creativity in innovation.² It looks:

> forward to a future in which individual creative talent is given the support it needs from childhood to flourish; in which artists and cultural institutions are freed from bureaucratic controls; and in which freedom to explore and enjoy creativity and culture is available to all.

*(DCMS 2001, online)*
The Green Paper, she says, demonstrates the British government’s recognition of the arts as a contributing factor in economic growth. Further, in the Foreword to the Green Paper, Blair proposes that the arts matter ‘because they can enrich all our lives’ (DCMS 2001). Seares contrasts this to the Australian government’s ‘neglect’ of the arts demonstrated by its inability to incorporate ‘culture and creativity into its national innovation agenda’ (Seares 2001: 4).

While acknowledging the benefits for universities of increased funding for research and innovation, many from within the academy also believe the government’s national innovation agenda is too restricted and that it needs to be opened out to allow it to properly attend to matters of culture, creativity and society. Academics from such fields have thus resisted on a range of fronts, in relation to diverse issues and in a range of ways (see the papers in Kenway et al. 2004). For example, the learned academies of the humanities and the social sciences lobbied the Australian government on the issue, and managed to ensure that the National Research Priorities were broadened somewhat. Other academics are reforming their curriculum and research directions within their own institutions so that they might better connect with certain knowledge economy imperatives, but at the same time speak to matters of culture and creativity.

Let us take the case of Cunningham and Hartley (Centre Director of the Creative Industries Research Applications Centre (CIRAC) at Queensland University of Technology (QUT), and Dean of the Creative Industries Faculty at QUT). They maintain ‘there’s a “commonsense” here that “creativity” means “scientists thinking creatively about innovation”’ (Cunningham and Hartley 2001: 7). Cunningham proposes an alternative to this techno-scientific model of innovation, saying ‘our sector’, which he refers to as ‘the applied social and creative disciplines’:

...needs to learn to see ourselves as part of the knowledge-based economy and as an integral and arguably central part of any decent innovation/R&D agenda, and to begin to win some degree of recognition for this association.

(Cunningham and Hartley 2001: 7)

In this report, Cunningham not only re-defines ‘innovation’ by positioning the applied social and creative disciplines as central to this definition, he also re-defines the role of the applied social and creative disciplines within the knowledge-based economy. The worth of the social and creative disciplines is no longer established by their cultural or social function. Where ‘their value derives solely from public good arguments’ (Hartley et al. 2002: 5). Rather, the value of these disciplines is now determined according to their commercial potential, Cunningham says:

‘creativity’ needs to be reconceptualised in line with the realities of contemporary commercial democracies. ‘Art’ needs to be understood as something intrinsic, not opposed, to the productive capacities of the contemporary global, mediated, technology-supported economy.

(Cunningham 2001: 3, original emphases)

As innovation and R&D in the applied social and creative disciplines (such as business, education, leisure and entertainment, media and communications) is viewed as being as
important to economic growth as innovation and R&D in science and technology, the
‘interconnection that exists between culture, creativity, and innovation’, which Searces
refers to in her address to the Australian National Press Club, is extended to include a
commercial dimension. ‘We can no longer afford to understand the social and creative
disciplines as commercially irrelevant, merely “civilising” activities. Instead they must
be recognized as one of the vanguards of the new economy’ says Cunningham (2002: 9,
emphasis added).

In the most comprehensive analysis of the creative industries in Queensland, the
Brisbane’s Creative Industries 2003 report identified four characteristics that combine
to define activity within the creative industries in Australia. The creative industries:

• involve activities which have their origin in individual creativity, skill and talent;
• have the potential for wealth and job creation through generation and exploitation
of intellectual property;
• have creative intangible inputs which add more economic and social value than is
added by manufacturing;
• encompass and link the traditional cultural industries (such as the performing arts)
with the new economy ‘info-intensive communication and cultural industries (such
as computer game design)’ (Cox et al. 2003: 6)

In keeping with these criterion, the Creative Industries Faculty at QUT ‘is dedicated to
the creative aspects of the new economy and the content industries – looking at the
development of content and creative technology applications’ (QUT 2003: 3). As ‘the
convergence of broadcasting, telecommunications, and computer communications has
reached a stage where technical infrastructure, connectivity and market capitalization
... are well advanced’ (QUT 2004, online).

The Creative Industries Faculty at QUT combines teaching and research in creative
arts subjects including Communication Design, Creative Writing, Dance, Drama, Fashion
Design, Film and Television, Journalism, Media Communication, Music and Sound,
and Visual Arts. The faculty represents a move towards reconceptualising the old-school
arts and humanities disciplines in terms of the knowledge-based economy as the creative
arts subjects offered in this faculty are applied to business and information technologies.
And content creation in ‘knowledge consumption services’ (such as entertainment,
education, government, health information and business) becomes the means to realise
commercial potential. The Creative Industries Faculty at QUT acknowledges the
important economic function of creativity by providing a curriculum where ‘creativity’
is viewed as ‘an enterprise sector’ and ‘creative industries emerge as the commercial, or
commercializable, applications of creativity’ (Cunningham and Hartley 2001: 4). For
example, the Bachelor of Creative Industries, which ‘prepares you to work as an
entrepreneur in the global knowledge economy’, entices prospective students by
maintaining it is at ‘the forefront of entrepreneurial, cultural, commercial and creative
developments’ (QUT 2004, online).

Cunninham and Hartley contribute to the debate on the future of the arts and
humanities in the current policy environment by using the language of knowledge
economy policy to re-define the science and technology led innovation/R&D agenda
and incorporate the applied social and creative disciplines:
This thinking broadly suggests that the future of the new economy does not lie solely in the development of scientific or knowledge silos but in the creation and integration of content to develop sustainable interactive environments. It allies individual artistic, design, writing and production talent with the broad social and commercial reach of information technology, media and entertainment. 

(Hartley et al. 2002: 6)

For Cunningham and Hartley the issue is not simply about recognising ‘creativity’ as ‘an enterprise sector’ in the creative industries. It is also about responding to technological change within the knowledge economy; disconnecting technology from science and re-applying it to the creative industries to position these industries as drivers of new technologies. QUT’s Cooperative Research Centre (CRC) for Interactive Design, which is part of the Creative Industries Faculty, is the first arts faculty to receive funding for a CRC. The Centre draws on creative, social and technological disciplines with a focused commercial intent: freeing ‘new technologies from old ways of thinking’ and transforming ‘concepts and curiosities into exciting applications and commercial outcomes’ (QUT 2004, online). It ‘provides one example of how research in the social and creative disciplines can be meaningfully hybridized with basic research in technology, to create new commercial opportunities’ (Hartley et al. 2002: 1). Research areas include human-computer interaction, user interface design, network capacity and new content production. The research that is pursued considers ‘the combination of all these elements as being interaction’, an understanding where commercialisation depends on a ‘whole product value proposition’ (Hartley et al. 2002: 8). The emphasis on research in the ‘content industries’ and interest in human computer interaction means the Interactive Design Centre focuses more on ‘knowledge consumption services’ than the knowledge production (of science and technology R&D initiatives), understanding that new commercial applications of knowledge are required for the knowledge economy, and recognising that this new economy is consumption driven (‘60–70% of GDP’ [Hartley et al. 2002: 1]).

The hybridisation of the creative industries and technology, in order to realise commercial potentials, explicitly addresses the new model of the knowledge economy that ‘is driven by convergence, globalisation and digitisation’ (Hartley et al. 2002: 5). Furthermore, the interest in ‘the complexities of human desire’ (Hartley et al. 2002: 8) and how users are affected by their interaction with new media content and new technologies acknowledges the role of consumption in the new knowledge economy.

**Merely commercial?**

The QUT agenda has the important benefit of challenging the reduction of the national innovation system in Australia to science and technology and, in this sense, it has made a major contribution to research policy. However, it also involves a somewhat uncritical acceptance of the notions that technology is the driver of economic growth and that R&D should be primarily steered towards enhancing commercial applications. We grant that the objectives of the Creative Industries Faculty at QUT challenge the technoscientific orientation of innovation in the knowledge economy by acknowledging the role played by the arts and creative disciplines within the innovation process. As Hearn (Research Development Coordinator in the Creative Industries Faculty) argues ‘we need to think of innovation in other terms apart from bio-tech’ (2002: 3). However, QUTs
aesthetic objectives nonetheless conform ‘with some variable of performativity’ (Bain 1995: 7) as ‘the commercialisation agenda ... is a dominant agenda in the faculty’ (Hearn 2002: 4). In other words, the creative arts are repackaged under the banner of industry. Grierson elaborates the point:

Creativity and innovation as fundamental practices of the arts are repositioned via the alignment of creative innovation with an economic model of enterprise.... Whereas the arts as imaginative practice are fed by powers of uncertainty that prevail through creative processes, the arts as industries are driven by the assumed certainty of a teleological end-point of productive worth and economic value.

(Grierson 2003: 5)

Such views, in a sense, exemplify the remarks Lyotard made about knowledge in The Postmodern Condition: A Report on Knowledge (1984) where he implicitly but accurately predicts knowledge economy policies. This report was commissioned by the Council of Universities (Provincial Government of Quebec, Canada) in 1979 and discusses the status and function of knowledge in the world’s most privileged societies in the final quarter of the twentieth century. In the report, Lyotard discusses the ways in which different ways of knowing about and dealing with the world (science, technology, law, the university system, etc) are understood and valued in contemporary society. He says:

Knowledge in the form of an informational commodity indispensable to productive power is already, and will continue to be, a major – perhaps the major – stake in the worldwide competition for power.

(Lyotard 1984: 5)

In The Postmodern Condition Lyotard reflects on some of the defining features and dominant themes of postmodernity: in particular ‘the relation between the social fragmentation of contemporary society and the global interconnection of media and markets’ (Williams 1998: 1). For Lyotard, rapid developments in science and technology and the global spread of capitalism since the Second World War have put an end to grand narratives. He states ‘the project of modernity ... has not been forsaken or forgotten, but destroyed, “liquidated”’ (1992: 18). Lyotard believes capitalism is driven by efficiency: as production and consumption are continuously made cheaper and quicker so as to maximise the potential for profit (see further Bullen et al. 2004). Knowledge, research and development in contemporary societies are driven by capitalism. Lyotard states:

Capitalism has been able to subordinate to itself the infinite desire for knowledge that animates the sciences and to submit its achievements to its own criterion of technicity: the rules of performance that requires the endless optimization of the cost/benefit ratio.

(Lyotard 1993b: 25)

While this link between performativity and capitalism is increasingly evident, knowledge economy policies position technology as the catalyst of revolutionary change and tend to locate technology outside of society and culture. In other words, as May says, they stress ‘the independence of technology from social forces’ (2002: 26). And, as Bimber
(1995: 84) explains, there is an assumption that ‘technological developments occur according to some naturally given logic, which is not culturally or socially determined, and that these developments force social adaptation and changes’. Elam (1994) identifies a further consequence of the focus on technology. He argues that, within the neo-Schumpeterian perspective:

Tangible but impersonal technologies have always been given precedence over the less palpable forces shaping economy and society. Even within the techno-economic sphere itself, the realm of embodied technology has continually dominated over that of disembodied technology which can now all too easily fall into a catch-all socio-institutional context.

(Elam 1994: 46–7, original emphases)

These forces also drive knowledge economy policies. Techno-scientific knowledge and social and creative knowledge are valuable only if they produce commercial results. Within this rationale all knowledge must have a practical use and produce tangible outcomes; as opposed to being ‘merely civilising’, providing critical commentary, stimulating public debate or representing not intellectual property but intellectual freedom. Within this system, the logic of performance ‘necessarily involves a certain level of terror: [knowledge must] be operational (that is, commensurable) or disappear’ says Lyotard (1984: xxiv). Any kind of knowledge and innovation that cannot be measured by capitalism’s standards (based on techno-efficiency and geared towards profit) remains neglected within this system: as ‘knowledge is and will be produced in order to be sold, it is and will be consumed in order to be valorized in a new production; in both cases, the goal is exchange’ (Lyotard 1984: 4).

As we have argued elsewhere (Bullen et al. 2004a, 2004b), research and learning in the arts and humanities are not a luxury (Bigelow 1998). Some of the benefits of humanities research Bigelow (1998: 37) identifies include:

- the vital role it plays in intellectual freedom;
- the indispensable service it provides through critical analysis;
- the provision of a sense of place in history and the world;
- its function as a key player in public culture;
- the preservation and transmission of traditions from one generation to the next;
- the questioning and maintenance of ethical values; and
- thinking constructively about what the future may hold.

However, these things are also largely intangible, certainly not technology-driven, and are problematic in terms of producing measurable economic outcomes – and ‘embodied technologies’ (Elam 1994). The benefits of aesthetic knowledges are difficult to measure quantitatively. And this places pressure on university faculties to justify their existence within the techno-economic understandings of the knowledge economy via the rhetoric of technologisation and commercialisation, innovation and hybrisation. Foregrounding the imperative to commercialise, Gillies (2001: 42) iterates some of the particular difficulties commercialisation poses for the humanities and social sciences, but concludes that these disciplines ‘risk deeper penury and even depiction as the Luddites of the twenty-first century, unless they can embrace the commercialising spirit’.
Lyotard maintains the postindustrial and postmodern age alters the status of knowledge. Technological transformations, the 'convergence, globalisation and digitisation' referred to by Hartley et al., now dictate the form that knowledge must take. And, according to knowledge economy policies, knowledge must be translatable into marketable and computerised information to be considered valuable: 'the creation and integration of content to develop sustainable interactive environments' promoted by Cunningham and Hartley. Lyotard predicts that as a result:

Anything in the constituted body of knowledge that is not translatable in this way will be abandoned and that the direction of new research will be dictated by the possibility of its eventual results being translatable into computer language.  

(Lyotard 1984: 4)

We do not suggest that the commercial and vocational orientation of the creative industries at QUT is inevitably problematic. Work in the arts and humanities has long existed 'within larger psycho-political-economic-cultural frameworks' (Wilson 2002: 6). What we do suggest however, is that, insofar as the creative industries project responds to the knowledge economy policy paradigm, the knowledge that it counts becomes highly circumscribed. The knowledge that matters in a knowledge-based economy is technological knowledge. The ultimate test of its worth, however, is its commercial value. This leaves some important questions unanswered. Indeed, as arts and humanities faculties like QUT change to meet the demands of these times, new questions arise. How are critical and disciplinary values to be reconciled with market values, the notion of the public intellectual with the entrepreneur, intellectual freedom with intellectual property? What will be the long-term effect of subsuming the traditional disciplines within programmes that are more transparently compatible with the aims, priorities, and rhetoric of knowledge economy policy?

Merely civilising?

According to Williams:

Lyotard’s philosophy rejects the argument that claims that the greatest performance and hence the greatest well-being can be achieved in capitalist systems. Instead, he draws our attention to the necessary injustice of systems dependent on a criterion of performance that cannot be sensitive to radically different ways of living.  

(Williams 1998: 4)

Lyotard’s Économie Libidinale (1993b [1974]) precedes The Postmodern Condition: A Report on Knowledge and ‘there are many of the characteristic hallmarks of postmodernism [in the text] – the disdain for tradition and its grand narratives, the refusal to enter into debate with one’s perceived opponents, the overwhelming sense of scepticism about current cultural values’ (Sim 1996: 18). In Économie Libidinale, Lyotard moves away from the ‘grand narratives’ of the Enlightenment project, with its focus on the mind and its privileging of rationality, and towards the postmodern body as a site for the play of libidinal forces and the discharge of energy. Lyotard’s philosophy is concerned with the materialist enactment of desire, as he believes it contains the possibility for
Lyotard's philosophy is a synthesis and repudiation of his earlier links with Marx's political economies and Freud's libido theory. Lyotard's perspective is 'not a familiar commonsense view of society ... [rather, he] stretches the definition of society to include in it a much stranger underlying matter' (Williams 1998: 12), namely the 'libidinal'. Lyotard 'calls the world “libidinal economic” where society is defined as an economy exploiting and releasing desires and feelings -- a fit description of a capitalist society' (Williams 1998: 10).

Lyotard's definition of society as 'libidinal economic' 'involves the description of systems as economies [or "dispositions"] regulating the flow of feelings and desires' (Williams 1998: 19, emphasis added). In this context, the 'innovation agenda' in the knowledge economy, consisting 'of the flows and relationships among industry, government and academia' (OECD 1996: 7), is the 'disposition' that 'control[s] feelings and desires ... [giving] account of the “proper” use of a feeling or the “proper” way to exploit and satisfy desires’ (Williams 1998: 48). 'Innovation' is defined as 'a specific ... activity carried out in the economic sphere with a commercial purpose' (Fagerberg 2002: 9). And the production of knowledge, is not simply seen as the generation of new ideas, but rather the generation of new ideas that lead to new products. Overall, this means all 'intensities' are reduced to a desire for profit or a desire to consume.

However, 'although the libidinal economy exploits intensities, it never fully understands or controls them' (Williams 1998: 40). In Lyotard's libidinal economy 'energy is [also] highly unstable. That is, libidinal intensities -- feelings and desires -- emerge in an unpredictable manner' (Williams 1998: 40, emphasis added). Therefore, although capitalism specialises in systematising desire through ‘the power of comparison’, as desire is by nature excessive, the capitalist system also contains disruptive energy: the ‘libidinal excess over and above exchange [which entails] an incommensurability -- not an equivalence’ (Cooper and Murphy 1999: 231). This libidinal force disturbs consensus from within, and makes possible the emergence of new forms and new voices. In this respect, the libidinal economy is a way to ‘explain the paradoxical relation between feelings, affects and desires and the dispositions at the basis of any account of these intensities’ (Williams 1998: 50). It is understood as ‘the state which calls into question all efforts at “grand narrative closure”’ (Sim 1996: 25). There is ‘no system without libidinal desires and feelings; no feelings and desires without systems’ (Williams 1998: 3). Lyotard’s libidinal economy is an economy where different possibilities for knowledge and action exist within a system determined by techno-economic concerns. In Lyotard’s libidinal economy the radical political potential of art, and more specifically, the philosophical category called aesthetics, are both valuable creative forces operating against the controls placed on knowledge and power by governments, corporations and the global market.

Let us now consider an example of libidinal energies within a university research setting that might defy the libidinal closure of knowledge economy policies. SymbioticA and its Tissue Culture & Art (TC&A) Project is an initiative in which aesthetic objects provide the means for critique in ways that engage with some of the pressing issues of these times. SymbioticA operates within the Department of Anatomy and Human Biology at the University of Western Australia. However, this is not a science research programme -- although it involves tissue engineering -- nor is it conducted by scientists. ‘SymbioticA is a research laboratory dedicated to the exploration of scientific knowledge in general, and biological technologies in particular, from an artistic and humanistic perspective’
Initiated by Oran Catts, the TC&A Project "explore[s] questions arising from the use of living tissue to create/grow semi-living objects/sculptures and to research the technologies involved in such a task" (Catts and Zurr 2002: 365).

In Lyotard's discussions of aesthetics, 'it is art's potential to challenge established ideas and systems that remains the point of focus' says Malpas (2003: 89). In the libidinal economy, artistic expression is a force that is irreducible to rational thought and resistant to closure. This form of desire 'belongs to no-one. [It] cannot be assumed, accepted, understood [or] locked up in names' (Lyotard 1993b: 20). It is a force that we can only experience.

The Pigs Wings Installation, which is part of the TC&A Project, uses the adage 'pigs might fly', a common expression describing an event that is extremely unlikely to occur, to highlight the fact that these wing shaped objects, grown using living pig tissue and animated using living muscle, are nascent half-natured, half-cultured organisms belonging to an as yet unrealised future. By creating partial life art organisms the project calls into question new knowledge and raises debate about the direction of biotechnology. This art does not offer direct answers to political and philosophical problems. Rather, it generates questions that challenge set ways of thinking and discourses that attempt to provide all-encompassing explanations and systems. As Lyotard suggests, 'if we are to testify to difference and fragmentation, then we must do so in art' (Williams 1998: 1).

It has been suggested that artists can be a key to innovation and creativity in industry and science because of their ability to 'see things differently' (Australia Council 1999: 1).

Artists are not only embracing all aspects of computers and telecommunications, but also concepts and artifacts of a wide range of biological and physical sciences and technology. Many are already working collaboratively and successfully with science and technology ... These projects are changing the concept of 'what an artist is' and, more importantly, 'what an artist can do'.

(Redford et al. 2002: 1)

Rather than conforming to the rules established by the knowledge economy: where creative endeavour must be reduced to commercial imperatives to be considered valuable, as demonstrated by the Creative Industries Faculty at QUT, the artists working on the TC&A Project 'return us to more fundamental sensations that have become hidden under elaborate forms of thought' (Williams 1998: 6). They achieve this effect by creating partial life entities that are the embodiment of the cultural fears and anxieties generated by developments in biotechnology. As scientific knowledge is explored from an artistic and humanistic perspective the political and critical role of aesthetic experiences and creativity is revealed. Catts says:

'We're not here to make money and I would say that if you put making money as the bottom line of what ever process you are [involved in then] you lose quite a lot of the innovation aspect of it because you are obviously narrowing yourself too much to something that might be sold ... we really see our work as more subversive in the sense that we are suggesting alternatives to biomedical research and also the ways it's being commercialised.'

(Catts 2002: 3)
Intentionally contentious and culturally and ethically ambiguous, the ambivalence that tissue culture art provokes in the viewer is designed to draw attention to 'our lack of cultural understanding in dealing with new knowledge and control over nature' (Catts and Zurr 2002: 370). As Catts (2002) explains:

Developments in technology are actualized possibilities, not necessarily the only ways knowledge can be utilized ... The exploration of contestable possibilities is important to the understanding of the ways technology may develop. By fostering artistic critical engagements with biological research, SymbioticA provides a 'greenhouse' for developing alternatives to the commercial mainstream.

(Catts 2002)

Conclusion

Throughout this chapter we have pointed to some of the limitations of knowledge economy policies. We have indicated that in privileging a techno-economic rationale and a commercial agenda such policies have some major blind spots with regard to cultural and creative economies; these are understood as merely cultural. We have also pointed to some of the ways in which the key edicts of knowledge economy policies have been, and indeed can be, contested by those who work within universities. Such contestations take various shapes and challenge various aspects of knowledge economy policies. We have implied that one of the reasons that those challenges rooted in notions of the cultural or the creative economy are able to achieve momentum is that they draw these economies into alignment with the key commercialising and technologising imperatives of knowledge economy policies. The aesthetic and the libidinal are, as Lyotard makes clear, harnessed in the interests of capitalism's latest inflection. The benefit here is that the relevant fields of arts and humanities knowledge not only survive but thrive. However, no longer understood as merely cultural they run the risk of becoming merely commercial. As we said at the outset, 'every presence defines an absence' and the absence that emerges here is the civil function and public good of the aesthetic knowledges associated with cultural economies. The knowledges generated by arts and humanities disciplines that have a 'merely civilising' critical, not commercial, value have, as a result of this double manoeuvre become further marginalised and diminished. Nonetheless, as we indicated drawing on Lyotard, a feature of libidinal economies is that the libidinal energies of art and aesthetics cannot be readily constrained and contained; they have a radical potential that emerges in unexpected places and forms. The striking irony of the Tissue Culture Project is that it deploys art and science to point very directly to some 'contestable possibilities' that exist in relation to the knowledge economy policies. And in so doing it points to some of the risks that techno science poses for humanity.

There are many questions that the above narratives pose for education as a field of research. The first and most obvious is how is educational research understood in knowledge economy terms? Is it seen as producing or being able to produce the sorts of exploitable knowledge that is so valued by the knowledge economy? Or, is it seen as incommensurable; as merely cultural or social? If so, is it not a paradox that knowledge can be understood as economic and education as cultural. Secondly, to what extent has educational research adopted the techno-economic rationale and commercial agenda that is so privileged by knowledge economy research policies? Is educational research
adoption of similar survival strategies to those adopted by certain creative industry faculties; is it becoming ‘merely commercial’? Is it ‘growing’ those aspects of itself that allow it to be seen as commensurable and shrinking those that are ‘merely civilising’? If so, is it not also a paradox that ‘the endless optimisation of the cost/benefit ratio’ (Lyotard 1993b: 25) now applies to education and that educational research can relinquish its civilising purposes under the name of knowledge? Is educational research simply ‘libidinal economic’ when it comes to the knowledge economy? Have education’s ‘intensities’ been reduced to a desire for performativity or does some disruptive energy, some ‘libidinal exceso, remain to interrupt consensus from within, and makes possible the surfacing of new forms and new voices? Does educational research still have leaky libidinal energies? If so, are they as deliberately contentious and culturally and ethically ambiguous as SymbioticA? If education were to have its own SymbioticA what might it look like?

Notes

1 This chapter arises from the Australian Research Council Discovery grant, Knowledge/economy/society: a sociological study of an education policy discourse in Australia in globalising circumstances, 2002–5. It is also the basis for a chapter of our forthcoming book called Haunting the Knowledge Economy to be published by Routledge in its International Library of Sociology Series edited by John Urry.

2 This paper is part of an ongoing policy commitment to the aims outlined in the initial Creative Industries Mapping Document of 1998. The UK is generally considered as demonstrating the prototype of contemporary creative industries policy frameworks and initiatives. The Blair government established a Creative Industries Task Force after its election in Britain in 1997. The newly created Department of Culture, Media and Sport (DCMS) prepared the Creative Industries Mapping Document in 1998. In the document creative industries were defined as ‘those activities which have their origin in individual creativity, skill and talent and which have the potential for wealth and job creation through the generation and exploitation of intellectual property’ (DCMS 1998, online). It mapped Advertising, Architecture, Arts and Antique Markets, Crafts, Design, Designer Fashion, Film, Interactive Leisure Software, Music, Television and Radio, Performing Arts, Publishing and Software into the creative industries sector. In Creative Britain, Chris Smith, the Minister for Culture and Heritage, also emphasised the centrality of the ‘creative economy’ – defined generically as ‘that cluster of individuals, enterprises and organisations that depends for the generation of value on creative skill and talent and on the intellectual property that it produces’ (1998: 15). By moving the creative industries ‘from the fringes to the mainstream’ (Smith 1998: 9) the Creative Industries Task Force identified an emerging global trend where the creative industries sector was recognised as the fastest growing sector of the global knowledge-based economy (see OECD 1996; Jeremy Rifkin The Age of Access 2000 and John Howkins The Creative Economy 2001). The most recent UK Creative Industries initiative is the Creative Industries Forum on Intellectual Property which brings together key players to discuss how to best meet the opportunities and threats that rapid technological developments are generating for the UK’s Creative Industries sector. The Forum will address key issues, such as: strategies for maximising the opportunities for the Creative Industries in a digital environment; business models; education and awareness raising; and challenges such as file-sharing and piracy (DCMS 2004, online).

3 Cunningham is both the senior consultant on the Creative Industries report and the Director of the Creative Industries Research and Applications Centre (CIRAC) at QUT. Content is defined as information disseminated via the internet, radio, television, advertising and the print media, and ‘content growth areas’ are identified as ‘online education, interactive television, multi-platform entertainment, computer games, and web design for business-to-consumer applications’ (Cunningham 2002: 3).
4 Lyotard’s ‘libidinal economy’ was inspired by Georges Bataille’s perspective on economic structure and his conception of a ‘general economy’ outlined in *The Accursed Share* (1988–91). In contrast to the notion of scarcity and capitalist restraint driving economic activity in classical economics, Bataille proposes a law of surplus where economic movement is viewed as a flow of energy in abundance or excess.

5 Aesthetics has two meanings in philosophy. The restricted sense is that it is the study of beauty in art and nature. More generally, it refers to the whole process of human perception and sensation: those feelings of pleasure and pain that are not reducible to clearly defined intellectual concepts.

References

Australia Council (1999) *Submission to the National Innovation Summit*.


Cunningham, S. (2002) ‘Culture, services, knowledge or is content king, or are we just drama queens?’, *Communications Research Forum*, Canberra: Australia.


Knowledge beyond the knowledge economy


