

Culture, Services, Knowledge
or
Is content King, or are we just drama Queens?

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Abstract

The paper tracks the fate of *content* as it passes across three grids of understanding: across the grid of 'culture', of 'services', and of 'knowledge'. These grids also serve as historical and/or possible rationales for state intervention in the creative industries, as well as industry's own understandings of their nature and role. While there was a cultural industries and policy 'heyday' around the 1980s and 1990s, as the domain of culture expanded, cultural policy fundamentals are being squeezed by a combined effects of the 'big three' - convergence, globalisation and digitisation – which are underpinning a services industries model of industry development and regulation. This model, despite dangers, carries advantages in that it can mainstream the creative industries as economic actors and lead to possible rejuvenation of hitherto marginalised types of content production.

But new developments around the knowledge-based economy point to the limitations for wealth creation of only micro-economic efficiency gains and liberalisation strategies, the classic services industries strategies. Recognising that such strategies won't get push up the value chain to innovation and knowledge-based industries, governments are now accepting a renewed interventionary role for the state in setting twenty-first century industry policies.

But the content (and, as sub-sector of them, the creative) industries *don't as a rule figure* in R&D and innovation strategies. The task is, first, to establish that the content industries indeed engage in what would be recognisable as R&D and exhibit value chains that integrate R&D into them. Second, to evaluate whether the state has an appropriate role to support such R&D in the same way and for the same reasons as it supports science and technology R&D.

Whither 'content'?

While content burgeons, its specialness is waning.

As more people become 'public writers', there is a fear that journalism as a distinct profession is becoming harder and harder to sustain. Recently journalism educator Sally Begbie (2002) has proposed policing the boundaries of journalism much more stringently. She has received the cold shoulder amongst the industry gatekeepers – those who hire the talent - for her efforts.

As the boundaries between 'professional' and 'amateur' performance are breaking down and what counts as performance and celebrity in popular culture is being reinvented, the issue of what drama actually is – for example, whether scripted or not - is becoming very important to the Media Entertainment and Arts Alliance and to Australian content regulators.

There is a great hue and cry from the commentariat about the dumbing down of the BBC as it competes head to head with the rapidly expanding commercial television sector in the UK. Much more content is claimed to have led to fewer and fewer peaks of excellence – what UK television used to be famous for.

What has happened to the heyday of the great popular dramas of the 1980s, that defined popular national sentiments leading up to the Bicentennial? In 1987, I wrote a long fan piece extolling the historical and aesthetic virtues of Kennedy-Miller's *Vietnam* as the 'Gesamtkunstwerk' of Australian television (Cunningham 1987). If I was taking liberties then with Wagnerian hyperbole, no-one is saying anything on TV today is a 'complete work of art'.

Today it is not Wagnerian, it is Orwellian – or perhaps the opposite of Orwellian, whatever that might mean. Of course, 'that' can't mean anything but - Big Brother. I'm coming back to *Big Brother* later.

We are in the era of *content*, that undifferentiated river that flows from Internet sites by their untold thousands, leaks from every radio, television, and boom box, screams from billboards, calls from newspaper headlines.

Where did that term content come from? We used to call things programs, papers, shows, films, the cinema, records, tracks, performances. Now it is all *content*.

I want to track the fate of *content* as it passes across three grids of understanding: across the grid of 'culture', of 'services', and of 'knowledge'. Think of a car or a cow going over a grid on a dusty road – will it go more or less smoothly over the bumps, or will it come to standstill, spooked by the unfamiliar ground under foot, like the

cow is supposed to? So come with me on an exploratory journey as we move from grids in familiar to those in unfamiliar and contested territory.

If content is King, then does this spell the end of the specialness of media information and creative content?

- of the public interest importance of information provision as ‘not just another business’?
- of creative content which is justified in attracting indefinitely prolonged public subsidy based on its non-market exceptionalism, aesthetic excellence and community development potential?

If content is King, then why doesn't it figure in almost any nations' innovation or research and development (R&D) agendas? Why isn't it recognised as a key driver of new economy growth and the much sought-after take-up of new technologies into business-to-consumer mass markets?

Or aren't the proselytisers of the specialness of content just drama queens? Here we are, wedded to outdated cultural nationalisms, and the preciousness of baby boomer taste formations in the face of the evidence that those who come after us are interested in their *own* cultures not ours? Not nation-defining dramas, but reality TV; not authored texts, but branded experiences. When will we *get* the logic of globalisation and post-nationalism? And aren't we the proselytisers of the content industries drama queens also for tilting at the formidable windmills of science-engineering-technology lobby?

Let's back track, to the first of our three grids, which also serve as rationales for state intervention in the creative industries, as well as industry's own understandings of their nature and role.

Culture

Culture is very much the home patch of us content proselytisers – where many of us grew up intellectually and feel most comfortable. Also, it has been around as a fundamental rationale for government's interest in regulation and subsidy for decades. For this reason, I am going to assume a lot about this grid and spend least time on it.

The 'cultural industries' was a term invented to embrace the commercial industry sectors – principally film, television, book publishing and music - which also delivered fundamental, popular culture to a national population. This led to a cultural industries policy 'heyday' around the 1980s and 1990s, as the domain of culture expanded. (In some places it is still expanding, but is not carrying much heft in the way of public dollars with it, and this expansion has elements trending towards the –

perfectly reasonable - social policy end of the policy space, with its emphasis on culture for community development ends).

Cultural policy fundamentals are being squeezed:

- They are nation-state specific in a time of WTO and globalisation
- Cultural nationalism is no longer in the ascendancy socially and culturally
- Policy rationales for the defence of national culture are less effective in the convergence space of new media. Marion Jacka's (2001) recent study of *Broadband Media in Australia* shows that broadband content needs industry development strategies not so much cultural strategies as broadband content is not the sort of higher-end content that has typically attracted regulatory or subsidy support (see Cunningham 2002a)
- the sheer size of the content industries and the relatively minute size of the arts, crafts and performing arts sub-sectors within them underline the need for clarity about the strategic direction of cultural policy (John Howkins in *The Creative Economy* (2001) estimates the total at \$US2.2 trillion in 1999, with the arts at 2% of this)
- perhaps most interestingly, and ironically, cultural industries policy was a 'victim of its own success': cultural industry arguments have indeed been taken seriously, often leading to the agenda being taken over by other, more powerful, industry and innovation departments (see O'Regan 2001 and Cunningham 2002b).

Services

This doesn't get talked about much in the cultural/audiovisual industries 'family', but it's *sine qua non* in telecommunications and in, well really, pretty much the rest of the economy. All OECD countries display service sectors which are by far the biggest sectors of their respective economies (the services sector in Australia is 65% of total businesses; 63% of total gross value added; and 73% of employment), and that relative size has generally been growing steadily for decades.

This is the broad sectoral basis for thinking through a new approach to industry development in the creative industries sector.

Much convergence talk has it that a potent but as yet unknown combination of digital television and broadband will become a, if not *the*, prime vehicle for the delivery or carriage of services. Education, banking, home management, e commerce and medical services are some of the everyday services which types of interactive television and broadband might deliver.

But for the media (and especially media content) to be considered *as* part of the service industries takes the convergence tendency to a new level. For most of its

history, media content, and the conditions under which it is produced and disseminated, have typically been treated as issues for cultural and social policy in a predominantly nation-building policy framework. They have been treated as 'not just another business' in terms of their carriage of content critical to citizenship, the information base necessary for a functioning democracy and as the primary vehicles for cultural expression within the nation.

In the emerging services industries policy and regulatory model (which some have also called the 'new' public interest), media content could be treated less as an exception ('not just another business') but as a fundamental, yet everyday, part of the social fabric. Rather than television's traditional sectoral bedfellows cinema, the performing arts, literature and multimedia, it is seen as more related to telecommunications, e-commerce, banking and financial services and education.

For media theorist John Hartley (1999: 140, 143), for example, television has a 'permanent' and 'general', rather specific and formal, educational role in the manners, attitudes and assumptions necessary for citizenly participation in communities. '(C)ontemporary popular media as guides to choice, or guides to the attitudes that inform choices' underpin Hartley's allied claim for the media's role in promoting 'Do-it-yourself' (DIY) citizenship.

The model carries dangers. It subjects all television systems to a normative, globalising perspective and thus weakens the specifics of a cultural case for national regulation and financial support. Its widespread adoption would see the triumph of what might be called the US regulatory model, where competition is the main policy lever and consumer protection rather than cultural development is the social dividend. The application of this model across the board is not a universal panacea for all industry regulatory problems, as most mid-level and smaller countries need to, or do, acknowledge.

However, there are also possible advantages. Hitherto marginal programming could be significantly upgraded in a services industries model. Programming produced for and by regional interests might be as fundamental as the guarantee of a basic telephone connection to all regardless of location. The need for programming inclusive of demographics such as youth and children might be as fundamental as free and compulsory schooling. Moves in various jurisdictions, including the EU and Canada, to give greater weighting to regional, infotainment, youth and children's programming signal a shift in priority of content regulation to include these alongside a continuing emphasis upon drama and social documentary (see Goldsmith et al 2001, 2002). While the latter advance core cultural objectives such as quality, innovation and cultural expression, the former warrant greater consideration in a services industries model of media content regulation in terms of their contribution to diversity, representation, access and equity.

The knowledge economy

We are not nearly as comfortable with this association. This is higher up the value-adding chain than the service industry sector. I believe that our sector 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. Because this is the unfamiliar grid, and we could easily get ourselves spooked, I want to spend some time on it.

From where has this new macro-focus emerged? In part, it's been around for a long time, with notional sub-divisions of the service or tertiary industry sector into quaternary and quinary sectors based on information management (4th sector) and knowledge generation (5th sector). But the shorter term influence is traceable to new growth theory in economics which has pointed to the limitations for wealth creation of only micro-economic efficiency gains and liberalisation strategies (Arthur 1996; Romer 1994, 1995). These have been the classic services industries strategies.

Governments are now attempting to advance knowledge-based economy models, which imply a renewed interventionary role for the state in setting twenty-first century industry policies, prioritisation of innovation and R&D-driven industries, intensive reskilling and education of the population, and a focus on universalising the benefits of connectivity through mass ICT literacy upgrades.

Every OECD economy, large or small, or even emerging economies (eg., Malaysia) can try to play this game, because a knowledge-based economy is not based on old-style comparative factor advantages, but on competitive advantage ie, what can be constructed out of integrated labour force, education, technology and investment strategies (eg., Japan, Singapore, Finland, etc).

But the content (and, as sub-sector of them, the creative) industries *don't as a rule figure in R&D and innovation strategies*. When they do, it is as last minute concessions to dogged lobbying, and are usually damned with faint praise or condescended to with benign indifference.

Let's take some of the most recent examples, from this country:

- *Backing Australia's Ability* (2001)
- *Knowledge Nation* (2001)
- Queensland's Department of Information and the Information Economy (DIIE) R & D Strategy Paper (2002)
- 'Developing National Research priorities: An issues paper' from May 2002
Knowledge Nation

'Knowledge Nation' (ALP 2001) was the Labor Party's compendium of policy options for stimulating a knowledge-based economy and society leading into the federal election in November 2001. For Knowledge Nation, the creative industries are

coterminous with the arts. The result of this conflation is that recommendations for advancing the creative industries are residual at best, being lumped in with some afterthought recompense for the university's humanities and social sciences rather than upfront in the document as the sector that will deliver the content essential for next generation information and communication sector growth. (ICT is seen as one of five key knowledge-based growth hotspots of the Australian economy into the future, along with biotechnology, environmental management, medical services, and education export).

While Knowledge Nation can claim against its political rivals that 'There was not one mention of the creative industries – the arts – in the Howard government's innovation statement', the patent limitations of complete equivalence of the arts and the creative industries has at this time escaped Australian Labor.

DIIE's Qld R & D Strategy Paper

The DIIE paper (DIIE 2002) is clearer and more explicit than Knowledge Nation about the relevance of creative industries to the broad R&D field. ICT infrastructure or the 'enabling technologies' for R&D include multimedia, broadcasting, 3D and games in the paper. And 'creative retail' like the arts and entertainment are also acknowledged as 'applications fields' for R & D.

However, none of these areas, acknowledged as R&D or R&D-influenced sectors, has been targeted under an R&D label for state-level investment to this date. Indeed, the term creative industries is used only once in the entire document (section 7.5).

And yet the principles on which Queensland wishes to build its R&D profile, such as opportunities to leverage private sector investment through strategic state involvements (section 6.9), and the value of leveraging existing infrastructure and traditional industries (such as the broadcasting infrastructure that exists today in Queensland) (section 4.15), could both be centrally addressed by R&D in the creative industries in Queensland.

The need to develop virtual clusters and bandwidth capacity (sections 4.25–4.27) would also be addressed in significant ways if the creative retail or consumer consumption end of demand for broadband in the broader business and consumer sectors as much as in the research community was engaged with by an R & D strategy.

'Developing National Research priorities: An issues paper'

There is a promise of integration between humanities and social sciences and science and technology in this paper, together with one paragraph containing a intention that it will be addressed in the future. But the reason given for prioritising science and

technology is simply that 75% of the country's outlays in R&D go to science and technology.

Why should the content industries be considered as a knowledge-based sector with R&D integral to its value chains?

Worldwide, the creative industries sector has been among the fastest growing sectors of the global economy. Several analysts, including the OECD (1998); the UK government through its Creative Industries Task Force (CITF 2001); Jeremy Rifkin in *The Age of Access* (2000); and John Howkins in *The Creative Economy* (2001), point to the crucial role they play in the new economy, with growth rates better than twice those of advanced economies as a whole. Entertainment has displaced defence in the US as the driver of new technology take-up, and has overtaken defence and aerospace as the biggest sector of the US economy (Rifkin 2000: 161).

Rather than being relegated to a residual or marginal status in new economy business practice, sociologists Lash and Urry (1994) and business analyst John Howkins (2001: Ch 4) claim that creative production has become a model for new economy business practice (outsourcing; the temporary company; the 'producer' model of project management; just-in-time teams, etc). Rifkin (2000: 163-4) claims that cultural production will ascend to the first tier of economic life, with information and services moving to the second tier, manufacturing to the third tier and agriculture to the fourth tier.

Most R&D priorities reflect a science and technology led agenda at the expense of new economy imperatives for R&D in the content industries, broadly defined. The broad content industries (or 'knowledge consumption services') sector derives from the applied social and creative disciplines (business, education, leisure and entertainment, media and communications) and represents 25% of the US economy, whilst the new science sector (agricultural biotech, fiber, construction materials, energy and pharmaceuticals) for example, accounts for only 15% of the economy (Rifkin 2000: 52).

In fact all modern economies are consumption driven (60% of GDP in Australia and 62% of US GDP – see Hearn et al 1998) and the social technologies that manage consumption all derive from the social and creative disciplines.

We can no longer afford to understand the social and creative disciplines as commercially irrelevant, merely 'civilising' activities. Instead they must be recognised as one of the vanguards of the new economy. R&D strategies must work to catch the emerging wave of innovation needed to meet demand for content creation in entertainment, education and health information, and to build and exploit universal networked broadband architectures in strategic partnerships with industry.

Not only is R&D in the applied social and creative disciplines required for its own commercial potential, but also because such R&D must be hybridised with science and technology research to realise the commercial potential of the latter. Commercialisation depends on 'whole product value propositions' not just basic research.

Let me try out some examples on you.

***Big Brother* and other innovative multimedia as R&D 'laboratories'**

To see, as I did recently, the BBC's *Walking with Beasts* in action in its full interactive format on a digital television platform now widely adopted in the UK is to be aware of the magnificent resources of the world's foremost public broadcaster as an R&D 'laboratory'. The BBC is gearing up to do fifteen more interactive television documentaries in the next year.

Then there is a small multimedia business in inner Brisbane called Hoodlum Entertainment which has just done one of this country's first multi-platform soap operas, *Fat Cow Motel*. This is very local content R&D, backed by another relatively marginal player, the regional subscription TV service Austar. We need fifteen more Fat Cow Motels!

These are the R&D laboratories of the creative industries, as surely as CSIRO or Telstra or the Bureau of Meteorology or Siemens or Boeing or Mitsubishi have R&D labs. If they are really lucky, they get \$85 million of taxpayers money if they set up R&D labs, as was the case with Mitsubishi earlier this year.

Good for Mitsubishi! Good for South Australia! But the creative industries want some of this action.

Let's take another recent, relevant but probably controversial example, the *Big Brother* reality television phenomenon world-wide, and its production franchise based on the Gold Coast this year and last year. Do the technical, cultural, broadcasting, internet, advertising, marketing and event innovations developed in the Southern Star franchise on the Gold Coast (and of course its sister events elsewhere) make it arguably the most significant single innovative event in the creative industries in Queensland ever?

Big Brother was a multi-platform, cross-promotional 'media event'. It was accessible in the traditional way on free-to-air, via the official Big Brother website with discussion forums, on unofficial fan sites. It was catchable via radio updates (30 second grabs every hour on Triple M in Australia). There was telephone voting, SMS updates to mobiles, and if you were in the UK, there was live coverage/unedited rushes on digital channel in Britain up to 18 hours a day!

There is a *Big Brother* innovation ‘system’:

- it is an international system, a learning system which achieves technology-transfer and format and style upgrades around the world very rapidly
- its assists in solving problems for major services industry sectors like advertisers and marketing which benefit from integrated marketing innovations
- there are technological innovations in the successful trialing of such a large - scale convergent, multi-platform delivery system
- there is industry innovation due to successful trialing of regional capacity for large-scale production.

Not convinced? What if we were to substitute the *content* of *Big Brother* for, say, a similarly-resourced experiment in the convergent, multi-platform, delivery of government services to a client base similar to that which tuned in or accessed the website or bought the products marketed through the program? If that had been the case, there is no question that a great victory for government leadership in innovation would have been claimed.

Why don't the content industries figure as knowledge industries with R&D needs?

Now, we can ‘curse the darkness’ or we can ‘light a candle’. We can rehearse the reasons, deeply embedded in our Western cultures, for the chasm that separates the arts and sciences that C. P. Snow (1959) rehearsed decades ago. But let’s instead ‘light a candle’ by trying to understand the problem from the other side, as it were.

- relevance to smaller economies

Let’s go back to Rifkin. He claims that cultural production will ascend to the first tier of economic life, with information and services moving to the second tier, manufacturing to the third tier and agriculture to the fourth tier.

By tiers, Rifkin means both the size of the sector in the economy, and the amount of value-adding within each sector. Of course, Rifkin, like most business booster analysts, is predominantly talking about the world’s biggest single economy, the United States. Many, if not most, of the world’s economies lag behind or are somewhat differently constructed than the US’s is.

This helps to understand why the creative industries don’t figure large in industry policy and R&D, nor in discourses about the knowledge-based society or the knowledge-based economy. It is because small economies historically based on staple supply, extractive industries, and lower value-adding service industries, such as tourism, with only recent significant growth in elaborately transformed manufactures

and knowledge-based emergent industry sectors, are not obeying the same rules that can be observed in the US economy.

- services versus R&D

Second, it should be acknowledged that the great majority of the ‘good news’ economic data adduced to point to the economic dynamism and centrality of the creative industries to the new economy are services sector data. They relate to creative retail rather than to any R&D process that may be argued to be essential to the generation of creative content.

That part of the large and growing creative industries sector which is also a part of an emerging industries sector, that is, one requiring R&D-style investment in experimental technologies or applications – the arena inscribed by the ‘digital applications for creative industries’ – are not big enough to justify any but marginal policy focus supported by mainstream economic data.

- not recognised and justified before as R&D

Both the digital applications sub-sector, and the larger sector from which it is growing, have been sectors supported by public subsidy and, in those sectors where there is a fully industrialised and commercial focus, such as film, television, games, music, Australia is a significant net importer of such product. So their dynamism has real social and cultural benefit for a country but problematically established direct economic benefits. This can be reasonably sharply contrasted with the communications and IT & T sector, which is perceived to drive significant productivity growth throughout the economy and to be a substantial sector in its own right, with greater export potential.

But a small, peripheral country cannot afford to bow to a perceived iron law of comparative advantage enjoyed by the US and the UK in creative industries pre-eminence (note that all of Howkins’ (2001: Ch 3) creative industries sectors are dominated by the US and the UK, with very few exceptions). This fact is well accepted in the science-engineering-technology fields, where relative competitive advantage is *constructed* - in part through state interventions.

The government’s role is to seed risky innovation in those sectors with most potential for growth and wealth creation – just as in SET R&D.

To be schematic, we progress from the cultural to the services frame by the application of contemporary *industry* policies. We progress from the cultural and the services to the knowledge frame by the application of *R&D* policies.

- the commercial nature of the big creative industries

Another reason has to do with the *thoroughly* commercial nature of R & D investment in the big creative industries. There might simply not be robust enough arguments for state interventions in what are, after all, massive multinational commercial enterprises and sectors. The argument against this is essentially the same as the one above.

While this may be to a significant (but by no means complete) extent true of the US economy, it is true of probably no other economy. While the private sector is the major driver of creative industries such as film, broadcasting, music, games, leisure software, architecture, and so on, smaller economies always need public sector involvements. This is reinforced by the risk-averse nature of private sector investment in smaller economies like Australia's. R&D, properly defined, for the creative industries will always be in need of public sector understanding and involvement.

- the creative industries are intrinsically hybrid

The creative industries can be thought of as intrinsically hybrid in their nature. They are at once cultural, service-based – both wholesale and retail, R&D based, and part of the volunteer, community sector. In this sense, one can make a general case for the creative industries being central in a knowledge-based *society*. But their specific, focused connection to the knowledge-based *economy*, and to public policy interventions specific to it, might, to some, remain diffuse.

- practical problems with R&D investment in the creative industries

Access to capital through seed and venture funding is often particularly difficult within this sector. Where venture capital players are looking for intellectual property that can be exploited and thereby result in substantial growth, the intellectual resources in the creative industries sectors are often the people themselves rather than a new product or service. This represents a more difficult assessment process for investors, with higher risk factors and often lower growth potential. But it could also mean that industry departments need to structure their programs of assistance better to engage this sector.

Concluding comments

So, is content King?

If it is to be, it will probably lose its 'not just another business' tag as it is folded into a services industries generic framework.

But it certainly isn't King according to our R&D decision makers. Are we just drama queens for trying to make what might seem a quixotic gesture, tilting at the formidable windmills and lobbying prowess of science-engineering-technology (SET)?

The services model for understanding the emerging role of content is valuable, as it tells the story of the ever deeper embedding of content in the absolutely mainstream economy. But it won't get us up the value chain to R&D investment and innovation.

The task is, first, to establish that the content industries indeed engage in what would be recognisable as R&D and exhibit value chains that integrate R&D into them. Second, to evaluate whether the state has an appropriate role to support such R&D in the same way and for the same reasons as it supports SET R&D.

Major international content growth areas, such as online education, interactive television, multi-platform entertainment, computer games, web design for business-to-consumer applications, or virtual tourism and heritage, need *research* that seeks to understand how complex systems involving entertainment, information, education, technological literacy, integrated marketing, lifestyle and aspirational psychographics and cultural capital interrelate.

They also need *development* through trialing and prototyping supported by test beds and infrastructure provision in R&D-style laboratories. They need these in the context of ever shortening innovation cycles and greater competition in rapidly expanding global markets.

Perhaps we can say it better, and finally, if we say that the creative industries are simultaneously *cultural* industries delivering crucial representation, self-recognition and critique in a globalising world. They are *service* industries delivering basic information and entertainment services in a converging services environment and *knowledge* industries requiring very significant levels of R&D to continue to innovate and to provide content and applications that 'make the wires sing'.

References

Arthur, Brian 1997, 'Increasing Returns and the New World of Business', in J. Seely Brown (ed.), *Seeing Differently: Insights on Innovation*, Harvard Business Review Books, Boston: 3-18.

ALP (Australian Labor Party) 2001, *An Agenda for the Knowledge Nation: Report of the Knowledge Nation Task Force*, Canberra, Chifley Research Centre, <http://www.alp.org.au/download.html?filename=federal/reports/kn_report_020701.pdf>

Sally Begbie (2002), 'Securing a safe future for Australia's journalist and journalism', paper presented to Australian Broadcasting Authority 2nd Annual Conference, Canberra, April.

CITF (Creative Industries Task Force) 2001, <http://www.culture.gov.uk/creative/mapping.html>

Cunningham, S., 'Jewel in the Crown', *Filmnews*, 17, No.4 (May 1987), pp.8-9.

Cunningham, S. (2002a), 'Policies and Strategies', in K.Harley (ed), *Australian Content in new Media: Seminar Proceedings*, Network Insight, RMIT, Sydney, pp. 39-42

Cunningham, S. (2002b), 'From Cultural to Creative Industries: Theory, Industry, and Policy Implications' *Media Information Australia Incorporating Culture & Policy*, No 102, February, pp.54-65.

DIIE (Department of Information and the Information Economy) R & D Strategy Paper (2002) www.iie.qld.gov.au/research/strategy.html

Goldsmith, B., Thomas, J., O'Regan, T. and Cunningham, S. 2001, *The Future for Local Content? Options for Emerging Technologies* (Queen Victoria Building NSW: Australian Broadcasting Authority, June 2001)

Goldsmith, B., Thomas, J., O'Regan, T. and Cunningham, S. 2001, 'Asserting Cultural and Social Regulatory Principles in Converging Media Systems', in Marc Raboy (ed), *Global Media Policy in the New Millennium* (London: University of Luton Press, 2002).

Hartley, J. 1999, *Uses of Television*, Routledge, London.

Hearn, G., Mandeville, T. and Anthony, D. (1998) *The communication superhighway: Social and economic change in the digital age*. Sydney: Allen and Unwin.

Howkins, John 2001, *The Creative Economy: How People Make Money From Ideas*, Allen Lane, London.

Jacka, Marion (2001), *Broadband Media in Australia: Tales from the frontier* Australian Film Commission, Sydney.

O'Regan, Tom 2001, *Cultural Policy: Rejuvenate or Wither?* Griffith University Professorial Lecture <<http://www.gu.edu.au/centre/cmp/mcr1publications.html#tom>>

Organisation for Economic Co-operation and Development (OECD) 1998, *Content as a New Growth Industry*, OECD, Paris.

Rifkin, Jeremy 2000, *The Age of Access: How the Shift from Ownership to Access is Transforming Modern Life*, Penguin, London.

Romer, Paul 1994, 'The Origins of Endogenous Growth', *Journal of Economic Perspectives*, Vol. 8, No. 1, Winter, pp. 3-22.

Romer, Paul 1995, Interview with Peter Robinson, *Forbes*, Vol. 155, issue 12, pp. 66-70.

Snow, C. P. (1959), *The Two Cultures and the Scientific Revolution* London.