

Trajectories of Broadband: The Coming, Going and Return of Broadband

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Abstract

As the paper's subtitle suggests broadband has had a remarkably checkered trajectory in Australia. It was synonymous with the early 1990s information superhighway and seemed to presage a moment in which "content is [to be] king". It disappeared almost entirely as a public priority in the mid to late 1990s as infrastructure and content were disconnected in services frameworks focused on information and communication technologies. And it came back in the 2000s as a critical infrastructure for innovation and the knowledge economy. But this time content was not king but rather an intermediate input at the service of innovating industries and processes. Broadband was a critical infrastructure for the digitally-based creative industries. Today the quality of the broadband infrastructure in Australia—itsself an outcome of these different policy frameworks—is identified as "fraudband" holding back business, creativity and consumer uptake. In this paper I use the checkered trajectory of broadband on Australian political and policy horizons as a stepping off point to reflect on the ideas governing these changing governmental and public settings. This history enables me to explore how content and infrastructure are simultaneously connected and disconnected in our thinking. And, finally, I want to make some remarks about the way communication, particularly media communication, has been marginally positioned after being, initially so apparently central. This paper is based upon research I jointly undertook with Mark Ryan.

Introduction

Broadband has had a remarkably checkered trajectory in Australia. It was synonymous in the early 1990s with the information superhighway and seemed to presage a moment in which "content is [to be] king". It disappeared almost entirely as a public priority in the mid to late 1990s as infrastructure and content were disconnected when policy frameworks focused on information and communication technologies. And it came back in the 2000s as a critical infrastructure for innovation and the knowledge economy. But this time content was not king but rather an intermediate input at the service of innovating industries and processes. Today the quality of the broadband infrastructure in Australia—itsself a legacy of these different policy frameworks is routinely identified as "fraudband" holding back business, creativity and consumer uptake (Crowe, 2006, p. 11).

In this address I will explore aspects of this trajectory. My focus will be mostly on policy conversations. My starting point is that these conversations are not just political speech making. The bald trajectory I will be outlining for broadband is not just about politicians stepping the face of their immediate predecessors—although there is a bit of that given the very personal political rivalry between Keating and Howard—it is also about politicians and policy makers projecting their "making a difference", doing something that they and their governments can be "known for". Our policy conversations have a necessarily improvised and experimental character to

them as verbal associations are made which bring together concepts, distinct orders and establish new relations among them, bringing about new orderings in the world. These verbal associations link networks of actors in government, industry and civil society—they are embedded in particular practices and institutions with real effects.

I come to this broadband story not through a telecommunications interest but through a screen and media studies concern for trajectories of “screen content”. I am concerned with our broadband conversations for the effect they have had on the way we think about the media industries as variously cultural industries, content industries and creative industries; and the way these changing policy configurations alter the reality we see, the research agendas we pursue and even the enthusiasms, passion and skepticism we practice.

This paper is part of a larger inquiry into the language and practice of content in the internet era; it is necessarily also about the fate of media and communication studies over the past decade. And it is a personal story of someone caught up and partly spoken by these policy and political worlds.

Broadband and the Information Superhighway

In 1994 Broadband was conceived as the eventual lynchpin of an emerging information superhighway in the report of the Broadband Services Expert Group *Networking Australia's Future* (1994), of the national cultural policy statement *Creative Nation* (Commonwealth of Australia, 1994) and of an emerging content industry in *Commerce in Content* (Cutler & Company, 1994).¹

Broadband was foregrounded here as a critical governmental priority for future economic growth, productivity and the development of an information economy. It seemed to presage a moment in which with the appropriate broadband infrastructure in place “content would [be] king”. Content, particularly media related content, would drive the uptake of services, broadband services. Broadband would in its turn change the way in which we encounter information and entertainment media. And the media- and culture- related industries would find new and expanded horizons for the exercise of their creativity in multimedia and the “content” industries. The entertainment (and cultural) economy of the media would combine with the information economy to drive broadband uptake from the home to business to government.

The Keating Government's priority in this round of interconnected policy making was to take Australia into a new services environment created by the convergence of communication, information and entertainment—‘broadcasting, telecommunications, computing and creative (i.e. film and content production) industries and technologies’ (CoA, 1994: 56). This new services environment joined the *creative infrastructure* and the *communications infrastructure* of ‘broadband’ and interim platforms such as CD-Rom. In a departure from precedent the creative infrastructure of creative producers and user environments were foregrounded at the expense of the communications infrastructure.

¹ This discussion draws on O'Regan & Ryan, 2004.

The Broadband Services Expert Group (1994) nominated content as the critical issue. This was because ‘we need content to develop services as well as to reinforce our cultural values’ (BSEG, 1994: viii). *Creative Nation* confirmed that, in the ‘epoch’ of the information superhighway, content would be ‘absolutely critical’ and ‘what we put onto the highway ... really matters’ (CoA, 1994: 55). Paying attention to the creative infrastructure—the creative talent pools and user environments of *Commerce in Content* (Cutler & Co, 1994)—made sense because *multimedia products* will drive the development of vast new services. The goal of developing sophisticated communications infrastructure depended on the availability of product, services and demand for these. So Australia’s opportunity in this environment lay in it becoming a ‘world leader’ in the *production and useage* of content. Governmental focus therefore needed to be on hastening the roll out of broadband infrastructure, creating product and nurturing the talent pools necessary for multimedia creation *and* developing the demand for multimedia in the new ‘era of computer and communications-based interactive multimedia services’ (Cutler & Co, 1994: 4).

The broadband information superhighway was here an instrument of carriage for the *new (cultural) products and services* of the impending convergence of telecommunications, computing, broadcasting and creative industries. The broadband superhighway was therefore a *conduit for content*—variously programming, applications, and interactive multimedia. As a conduit it was subject to constraints and distribution bottlenecks which needed to be overcome so that the content developing and publishing industries in Australia could produce—and consumers access—the ‘knowledge banks’, ‘databases’ and interactive services of ‘Australian servers and publishing nodes’ (Cutler & Co, 1994: 3-4). This preferred version of the information superhighway was characterised by speed and mobility, accessibility and openness, seemingly effortless multiple and simultaneous carriage, and multiple and varied uses of content. Content was envisaged here as the crucial element to an environment characterized by the transmission of many broadcasts; the carriage of huge amounts of data, entertainment and information programming; the development of large-scale interactive networks placed anywhere on a continuum between the dial-up possibilities of pay-per-view to the routine realities of the ordinary telephone call; and the development of unprecedented kinds of multimedia product for these networks. The very existence of so much communications capacity gave content providers new centrality.

The Keating government’s broadband and content linkage—itself a local variant of the “content is king” and “information superhighway push” internationally—posed a set of connections and linkages which functioned as benchmarks for my generation of media and communications scholars. The first iteration of broadband challenged us to rethink the settled relation between platform and content; and the relations among telecommunications, ICTs and the media industry. It required us to envisage new content orders—the new forms of hybrid content—then multimedia (what we now call digital content and applications). It asked us to reconsider technological perspectives. Was broadband more than just a platform? Was it a medium which in its potential for interactivity predisposed content in particular ways just as print, broadcasting and

telephony had done so previously? It encouraged us to wonder whether there might be a new order developing in which media and culture were central in many different domains. And because broadband seemed inescapably at the centre of the information superhighway, the future of culture and the “cultural industries” were inextricably linked to broadband rollout. In the first half of the 1990s media scholars imagined all sorts of content bulking up for broadband development, we thought about how existing content could be reconfigured to be squeezed onto the commodious, limitless highway. Some tried to make it a reality. I spent a couple of years developing the “Culture and Communication Reading Room” website at Murdoch University in this period (<http://wwwmcc.murdoch.edu.au/ReadingRoom/>). It got us talking and thinking prospectively.

But in this process the very nature of “content” became curiously evacuated and deferred. It was as if the very sense of potential, of blue sky, limitless horizons precluded us from envisaging the “contents” of content, its distribution and consumption contexts. We wrote about these new forms of content and the broadband conditions that would support them. We got caught up in desires for broadband rollouts, worrying about whether infrastructure was being rolled out quick enough. We worried away at governments sharing the vision but not doing enough to bring it about. We benchmarked Australian developments in supercorridors against our regional counterparts. We were hooked on the verbal association between broadband and culture. Media and communication studies was straying here into the fields not just of telecommunications but of information policy, we mattered there too.

The legacy of this moment in our thinking is still evident. The notion of a necessary association between broadband and content is still the norm among contemporary content activists, digital content producers and media and communication scholars. It organized a way of initially thinking about the policy innovation of the Howard years. It certainly prevented me, for a time, from recognizing Howard government policy innovations. I often found myself after 1996—sometimes in the company of colleagues, policy analysts, professionals and bureaucrats—worrying away at our Australian loss of momentum, at the smallness of Telstra’s vision as it abandoned its early 1990s broadband rollout vision in favour of a narrowband BigPond service, railing against the low bandwidth version of broadband implicit in the innovation of ASDL, and lamenting the lack of a concerted policy for the digital content industries. The Keating years, when broadband, content industries and cultural policy considerations had pride of place, linger as a desired point of return.

Losing sight of Broadband

With the defeat of the Keating Labour government in 1996 and the success of the world-wide-web and dial-up networking as the entry point for online, broadband disappeared for a time from the policy vocabulary. In its pre-1996 election policy, *Australia Online*, the Liberal Party explicitly distanced itself from the cultural when it declared that ‘commerce, not culture’ was going to be ‘the driver of new applications and revenue’ (quoted in Green, 1996: 18). The early Howard governments conceptualised the critical issue as one of utilising existing infrastructure with the focus firmly on the uptake of information and

communication technology (ICT, Alston 1996). With infrastructure and content provision effectively decoupled, broadband was in a policy limbo. ICTs were seen a set of enabling technologies for Australian business, industry, education, households and the whole of Australia. The priority was getting adoption of computers and narrowband networking in school, in homes, in small businesses, and in rural and regional Australia. For this ICT policy world the media and content industries were at best a small subsector, at worst invisible.

Telecommunication trajectories offered broadband proponents no relief either. The priority here was to develop a competitive telecommunications regime including access regimes such as unbundling the local loop, internal separation of Telstra to ensure accountability and to dissuade anti-competitive behaviour and the sale of Telstra. Rolling-out new services in this context meant rolling-out national mobile telephone networks. Connectivity meant utilizing existing narrowband telecommunications networks in the most optimal fashion through the development of dial-up networking. Pay-TV remained still-born.

Unsurprisingly given the limited points of intersection with this new agenda, content interests were marginalized. They were neither a significant portfolio interest nor a significant economy interest. Content could only become significant in such a context when it added some value, when it produced an input into these industries, when the content industries became part of the portfolio of other, more important, industries.

From a policy and policy studies perspective the initial Howard years from 1996 to 1998/9 were characterized by an inescapable narrowing of the horizon of media and media content. Cultural perspectives and cultural policy orientations had little purchase. Given the centrality of ICTs, the media industries had no more than an incidental place. And yet this ICT focus did help scholars illuminate the impact of ICT on film and television production processes particularly within digital postproduction. It also suggested a weakening of the link between media studies and information studies as the focus shifted towards ICT policymaking and emerging computer and online digital divides. When I took over the Australian Key Centre for Cultural and Media Policy in early 1999 our major forthcoming report was an ICT and Schools project looking at the ICT skills of Australian school students (Meredyth et al, 1999); while our most high profile published report at that time was undoubtedly Scott McQuire's (1997) study of digital postproduction in the film and television industries *Crossing the Digital Threshold*. I remember being struck at the time by just how far this seemed to be away from the original project of cultural and media policy.

The decoupling of ICTs and content, left the criticism of media with diminished horizons. If the media was just another industry adopting ICTs and adapting to online environments, there was no pressure on media industry and policy settings to change. The value of the entertainment economy and domestic household consumption to the broader uptake and development of broadband was nowhere evident. It was the information economy—not the entertainment economy—that was being given priority. At the same time, reducing broadband to a telecommunications platform issue meant that government attention was on market settings, limiting the

scope of government intervention to areas of market failure, and areas likely to have most impact for other governmental programs and priorities. This was not fertile ground to think any emerging and prospective relation among broadcasting, Pay TV and broadband. In the governmental mind (and our too!) these became once again separated into old media and new media, media and telecommunications. There was the highly regulated free to air television sector and the apparently freer zone of the internet (so long as what was done there was not called TV). The legacy of this was clear. The Federal government thought it was doing enough by international standards. They had liberalized telecommunications and opened it up to new entrants. They had introduced a competitive telecommunication regulatory regime. They were letting the market decide. This left media scholars to lament the shortsighted character of the market at both points—the traditional media and the broadband content sides. Content here occupied the position as “some demonstration projects” which government would throw limited funding towards, and the broadband society was in some distant future.

Innovation Agenda

Undoubtedly the defining policy framework of the middle years of the Howard government, is its 1998 innovation agenda encapsulated in *Backing Australia's Ability I* and *II* in 1998 and 2004. This agenda emphasized the national innovation system and projected an information economy driven by research and development, science and technology to the exclusion of other drivers. Governments would assist in bringing about this knowledge-based information economy through the realignment and nurturing of core elements, that in turn would pervade and influence all aspects of a knowledge-based economy such as – education, research & development, technology, SME development (as the core of businesses in Australia are SMEs). To successfully achieve its policy ends the federal government invested in *education* to ensure the labour-force had the right skills to drive productivity in the knowledge economy; in strong *research* capabilities to drive R&D, technology, progress and innovation; in strong *advanced industries* to underpin this development; in vibrant SME's with export orientation as the majority of business in Australia are SMEs; in an advanced *health* sector to ensure social wellbeing but also because of important links with technology (nano and bio-technology) that relate directly to knowledge economy priorities; and in communities and rural and regional areas who need to be connected to the rest of the economy to capture nation wide inputs but also to eliminate social and economic disconnection.

This agenda stimulated interest in internet-related issues. The National Office of the Information Economy was created in October 2000. It not only pursued the digital divide between rich and poor, metropolitan and regional communities, non-Aboriginal and Aboriginal communities, it also laid the foundation for emerging policy interests in next generation internet, ie broadband networks linking researchers and research communities, businesses, health workers and governmental operations. Whereas the Keating years were marked by a concern to immediately set up a narrow band environment and prepare for a broadband future as the end point, increasingly the concern in the early 2000s was with setting up a broadband environment to succeed this existing narrowband base.

Broadband became the next critical next infrastructure for the Australian innovation system and its ICT strategy in the 2003 report of the Broadband Advisory Group *Australia's Broadband Connectivity* (2003) and the subsequent *National Broadband Strategy* of 2004. This renewed focus on broadband turned on the existence, roll-out and uptake of the broadband infrastructure. With science and innovation being the point of reference 'access to broadband was important because it was a key factor underpinning access to domestic and global research infrastructure' (Science and Innovation Mapping Taskforce, 2003, p.185). Broadband was increasingly a critical infrastructure for all industries including the digitally-based content industries, but it was especially important for the core areas of governmental priority and responsibility in regional, rural, remote regions, SMEs, Health, Communities, Education, Research and Advanced Industries. Attention to these areas would lay the foundation of the knowledge-based economy and get the knowledge economy working. The content industries were in this a small player, not the key player driving broadband rollout. Innovation and ICT considerations drove instead how broadband was conceived, regulated, government funded and prioritized. Unsurprisingly the content industries were less significant in their own right as cultural and media industries, and only valued when they added value to knowledge economy priorities.

The family of issues of the earlier period had been drastically reshaped. Without their own place within the knowledge economy strategies of Australian governments, the content industries needed to be translated through these agendas. They became conceptualized as part of the ICT industries and as intermediate inputs into the broader economy (O'Regan & Ryan 2004). The media, entertainment and cultural industries became through this process of translation—particularly in the several creative industries cluster studies both undertaken and commissioned by the Department of Communication, Information Technology and the Arts from 2002-2004²—a transitional sector that was perceived as important but not core knowledge-based economy priority (see Xamax Consultancy and Content Strategies 2003, Convergent Consulting 2003a, 2003b, Cutler and Company 2002, Cutler and Company and QUT CIRA 2003, DCITA and NOIE 2002, Pattinson Consulting 2003, Higgs and Kennedy 2003). Creative industries became in this context an improvised “political category” with an emphasis on enterprise dynamics and new economy characteristics to accommodate media, entertainment and cultural industries and the “intermediate inputs” these creative industries provided to other industries. The policy case was being made here as a case for digital content industries on broadband networks. It was made on the basis of their economic significance, their high growth, their capacity to generate economic multipliers, their emerging role as important enablers and providers of inputs to other industry sectors and their role in fuelling creativity (see QUT and Cutler and Company, 2003, p. 11). This research activity coupled with the energetic campaign on the part of industry proponents such as Terry Cutler and Tom Kennedy and academics such as

² Some of the The reports For

Stuart Cunningham and his colleagues in QUT, provided a mechanism for content to get a seat at the knowledge economy table.

The impact of these developments on the content industries and their relation to government was to require industry actors to frame their industry activities in terms of immediate problems affecting their productivity and innovation. This is evident in the Federal government's FIBRE (Film Industry Broadband Resources Enterprise Pty Ltd) Broadband initiative for screen post-production which provided targeted funding assistance to 'facilitate the lowering of the cost of bandwidth for the sector as a whole' and to 'improve the ability of the sector to network post-production teams, and assist Australia to retain its world-class practitioners' Retaining this 'skill base will mean enhancing Australia's international competitiveness in this field' (DCITA 2006)—that is, permit the screen services industry to contribute to the knowledge-based economy.

It needs to be acknowledged that there has been considerable political, policy and regulatory activity, large-scale investment in, and national discussions revolving around the issue of broadband development. This activity was not only seen in the creation of the Broadband Advisory Group (BAG) and the release of a National Broadband Strategy for future broadband development, but also in other inquiries and subsequent implementation of their recommendations and the ongoing monitoring of and examination of broadband uptake. Major recommendations for further broadband development and investment were made in the Regional Telecommunications inquiry (RTI, 2002), in the House of Representatives Standing Committee on Communications, Information Technology and the Arts (2002) inquiry into Wireless Broadband Technologies and in the Higher Education Bandwidth Advisory Committee (2002) process. This policy activity has been preceded by a range of regulatory actions designed to support a more competitive telecommunication market conducive to broadband development. This has resulted in a particular kind of national conversation about broadband. The national conversation about broadband was broadly about the following issues:

- Going from narrowband to broadband environments across the economy.
- Infrastructure provision on the basis of economy wide implications and strategies for uptake; and on the basis of a "social" upskilling.
- Market failure areas where there is going to be difficulties in rolling out broadband—identified as regional and rural communities.
- Application of broadband in key areas of governmental responsibility – research, health, education.
- Australia's positioning in OECD league tables and the OECD broadband agenda. OECD prescriptions have advocated the governmental role as one of broadband development through facilitation and regulation.

This national conversation about broadband was one in which content does not figure large. The priority in this conversation has been "infrastructure" not "content". This is in stark contrast to first policy moment during the early 1990s, where for the Keating Government, content and broadband had an integral and critical relationship. Broadband was viewed as critical to driving the development of next-generation content and pay-TV services to the home,

and most importantly, critical to long-term competitiveness in the rapidly developing global content market (O'Regan & Ryan 2004).

A New Order?

In 2006 the quality of the broadband infrastructure in Australia—itsself an outcome of these different policy frameworks—has become an important public policy issue. Australia's broadband was being reported as comparatively expensive, it is characterised by slow speeds and there is limited public uptake (Crowe, 2006). This was holding back business, creativity and consumer uptake. Was this requiring a new dispensation which once again linked media policy and broadband policy development? Media industries are now active participants in broadband-related businesses. Whether it be Seven combining with Yahoo Australia, or WIN-TV buying SelecTV to develop its internet TV, pay-TV, and free-to-air television businesses; the connection between traditional and new media, pay TV and internet TV is once again giving broadband visibility in relation to the media industries. In November last year a report of an uncertain future was released entitled *Unlocking the Potential: Digital Content Industry Action Agenda* (The Strategic Industry Leaders Group, 2005). To some extent this report takes us full circle as once again the relation between broadband and entertainment services, broadband and consumers is on the agenda.

The production of digital content will be one of the major drivers of economic competitiveness in the coming decade and will make a major contribution to ensuring high levels of economic growth, a robust export capacity and a highly skilled workforce. (The Strategic Industry Leaders Group, 2005, p. 7)

The cultural product industries (Scott, 2004, p.462) —here called after the Australian fashion creative industries—had it seemed, made their return. Broadband rollout and content were being entwined at least in policy reports and ministerial press releases. As Minister Helen Coonan put it: 'New digital platforms and services are emerging and the rapid consumer adoption of broadband, wireless and digital broadcasting technologies provide exciting industry development opportunities' (Coonan, 13/4/2006). Broadband and the content industries had, tentatively, been recoupled driven in part by the critical mass in broadband uptake (3,161,600 connections as of March 2006, (Coonan, 23/6/2006)).

Perspectives

If there is going to be renewed attention and centrality to broadband and content it is worth reflecting upon what the focus upon innovation frameworks and improvisations at the level of creative industries and digital content mean for media analysis.

Within the interchangeable list of creative industries, cultural product industries, and digital content industries what we might once have called the media industry is not the unit of analysis. It becomes instead this larger grouping of the creative industries. These are the industries in the digital content agenda that need and are defined by their use of and potential need for broadband at both industry production and consumer levels. They are the place in which 'art, science and technology combine' (*Artbeat*, Summer 2005).

Broadband emerged strongly in this creative industries discourse as not so much about consumer broadband but broadband for businesses, for

creative sectors, for interfirm relationships, for cluster development as means to participate globally. It is a producer- and broadband-centric view of cultural production. Broadband appears here near exclusively as a producer technology.

Our conception of media within media and communication studies have been modified to accommodate these perspectives

- We are quite good now at recognizing the contribution of component bits in production processes. We are aware of diverse creative inputs and therefore service industries. This has not only broken down the film or TV program into different disaggregated parts but encouraged the identification of sectors which could service a variety of industries and not just film and TV.
- In the process we have tended to eschew the coherence of the project by focusing less on how it travels and is appreciated and more on how it is put together by the contributions of various service providers. So we inspect content under the sign of the technical innovations in component parts. We might, for instance, get excited by the information, telecommunications and editing logistics entailed in mounting the *Big Brother* show rather than with the programming itself.
- We have become necessarily interested in interconnections—arrangements, clusters, aggregations. Characteristically we map sectors and industries. We seek to identify emergent clusters, we have reintroduced geography as a powerful factor in analysis and policy prescription. We see broadband interconnectedness as a way of accentuating the work of the cluster we are focusing upon.
- We have enthusiastically associated innovation outside of television in new digital content rather than innovation within television. With television so apparently limited, broadband becomes a vehicle for doing what a good multichanneling system might have done. Except, of course, it must not look like free-to-air TV or pay-TV.
- These considerations of digital content construes, amplify and elaborate, a new domain of content. But what is the relation between the new content and the old media content?

My own research trajectories have borne the imprint of these larger broadband trajectories. I have re-educated myself in the literature of cultural and economic geography, of place making and cluster development. I have been inducted into the world of projects. While I can see the felicity of new shiny, digitally sublime content industries, I can also see the limitations of these seductive perspectives.

We do not use or need a digital content industries framework to think about the debacle of Australian media policy over the past two decades. There have been no new free-to-air stations for forty years in SMBA. We only recently lifted the moratorium on pay-TV. We maintain restrictions on multichannelling and on pay TV. We have, as a consequence, a relatively unsophisticated multichannel marketplace. It is not a media environment characterized by liberalization or by competition. In fact I believe that much of our enthusiasm for digital content policy and broadband, including Minister Helen Coonan's recent interest, stems from the fact that in this domain governments are not so

apparently constrained to endemic lose/lose solutions. Media policy failure has it seems made the digital content industries more important now.

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