Fascinated by the Future: Interpreting Australian Telecommunications Policy Debates[1]

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ABSTRACT *Rhetoric about the future has been a prominent theme in many areas of discussion about technology and change. As societies enter periods of change and uncertainty there is a growing need to deal with the future. This has been the case in the area of telecommunications policy in Australia but this feature of discourse is often taken for granted or not seen as problematic. This paper has two goals. First, it aims to analyse the significance of discourse about the future. This significance has a long historical precedent but it is intimately tied up with the notion of progress and technology. It has political ramifications since it functions to shore up expectations around specific interests—usually those of powerful corporations and governments. Second, it aims to relate the analysis about the future to recent Australian debates in telecommunications policy. Since many countries have been swept up in the enthusiasm for a telecommunications-based future, lessons from Australia may be very relevant. It is argued that some groups (users and consumer groups) would appear not to have had their expectations met in the areas of competition and universal service. In spite of this, some of Telecom Australia's views expressed in the 1975 planning exercise Telecom 2000 seem remarkably prescient today. This seeming paradox is discussed in terms of discourse on the future. A future based on an over reliance on technological or managerial determinism may well lock the country into a future of limited choice. It will be important that mechanisms are established to ensure that appropriate and timely choices can be made in telecommunications policy.*

Keywords: Australia, future, telecommunications policy, universal service.

Introduction

One of the interesting features of current debates about telecommunications around the world is the apparent fascination with the future. There seems no shortage of evidence for this. For example, a recent scholarly text carries the title *Beyond Competition: The Future of Telecommunications.*[2] The future is the theme of countless newspaper articles espousing the fantastic possibilities and sometimes-dire threats of information technology and telecommunications.[3] Government reports are also no strangers to addressing the future. A prominent theme of government reports across a wide range of counties over the past 5 years has been that of the 'information superhighway'.[4] More recently 'electronic commerce' has become somewhat of a catchcry. This fascination of governments with a future shaped by communications technologies is not a recent phenomenon. The revolutionary potential of telecommunications technology has been cited as a key to progress for many years.[5]

How do we make sense of this? Is this fascination with the future a genuine product

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of the fact that technology is driving change or is there a desperate need to predict and come to terms with the ensuing uncertainty? On the other hand, does this fascination with the future obscure political forces that are shaping our world and prevent us from exploring all possibilities for development?[6] What role does the future play and do we run the risk of taking the future for granted?

This paper has two goals. First, it aims to analyse the significance of discourse about the future. This significance has a long historical precedent but it is intimately tied up with the notion of progress and technology. It has political ramifications since it functions to shore up expectations around specific interests—usually those of powerful corporations and governments. Second, it aims to relate the analysis about the future to specific Australian debates in telecommunications. Australian experience is likely to be quite relevant to other countries currently experiencing an upsurge in corporate and government 'hype' about new technology. Australia moved relatively quickly after the US and the UK to deregulate its telecommunications sector. Regulatory models adopted in Australia have been used as templates in other countries. Consequently, the political and regulatory issues arising in Australia are unlikely to be unique and so lessons can be learned from the experience. In this paper, recent debates about the outcome of competition policy in telecommunications and universal service in Australia are discussed with the benefit of hindsight drawn from the *Telecom 2000* project of 1975. The conclusion is reached that while a focus on the future is necessary and characterised by unpredictability, there are certain elements of path dependency that limit what choices are ultimately available.

Futures Discourse and its Significance

Appreciating society's concern for the future is a major field of inquiry covering a range of epistemological threads.[7] It is beyond the scope of this paper to survey these. There is also much to suggest that concern for the future has a very long history.[8] However, it is possible to identify a number of prominent themes and consequences. I suggest that there are both cultural and ideological dimensions to appreciating the future.

In elaborating on the cultural dimension, I will draw on the work of Hofstede.[9] Hofstede's work is interesting in that he surveys a number of differences in work-related values based on culture. One such value is uncertainty avoidance. Uncertainty is a basic fact of life and different cultures have devised ways of coping with it in order to get on with their lives.[10] Some of these mechanisms for coping are more 'rational' than others. Hofstede makes the point that

> Modern society is less different from primitive society than we sometimes think. Its basic ingredient is man, and there is no evidence that human nature has changed much in the process of modernization. In any case, we share with primitive man a need for social cohesion and a limited tolerance for uncertainty. We dispose of infinitely better technological means to defend ourselves against risks, but unfortunately these means themselves always bring new risks; and we still feel the future to be very uncertain indeed. Like the social systems of primitive man, ours have developed their rituals to make uncertainty tolerable.[11]

According to Hofstede, modern society deals with uncertainty by using technology, rules and rituals in organisations. The use of technology (e.g. information technology in the office) engenders a degree of short-term predictability but with the problem that long-term risk of complete breakdown or unintended consequences are often overlooked.[12] It is perhaps not surprising to note that discourse on the future often draws on

so-called 'technological determined' futures. However, the rationale for the use of technology often hides non-rational value judgements in the use and design of such technology.[13] Rules are akin to law and they are designed to reduce the unpredictability of members of organisations and society. An example is the systems of bureaucracy that exist in many organisations. Such rules are like technology; they are not without problems. Rules can be semi-rational and if inappropriate, quite detrimental to the functioning of organisations. The third category is ritual and in this group Hofstede places organisational practices such as: memos and reports; parts of the financial accounting system; a large part of organisational planning systems; a large part of control systems; and finally, the nomination of experts.[14] In this respect, consultants, accountants and management gurus essentially become 'high priests' within the organisation, trying to manage uncertainty. There are some very evident cultural reasons why organisations have to deal with uncertainty and they do so in a variety of ways. In the case of telecommunications, an industry characterised by rapid technological and organisational change, this problem is particularly evident. The problem is further magnified if we think of the state, which has to manage uncertainty at the national and international level. My point is that it is not surprising to see discourses about the future figuring prominently in telecommunications. Even more prominent are futures based on patterns of expectations to do with technology, especially since telecommunications traditionally has been heavily reliant on technology.

If it can be accepted that organisations (and society) deal with uncertainty in different ways, then how effectively they do so will be important. One way to conceptualise this point comes from Boulding.[15] He points out that development is essentially a knowledge process which can be thought of as a combination of printing and organising, the one developing rote knowledge, the other developing new knowledge. As a consequence, the acquisition of new knowledge becomes a key to further development and the learning process is equally as important. If these links are accepted, then discourses about the future and their related rituals (which essentially treat the problem of uncertainty) become important in the way an organisation chooses to structure and see itself, how an economy is organised, and how a government formulates policies to respond to the future. The fascination with the future now takes on a more serious focus. If a country or organisation gets it wrong then there could be serious consequences. If the fascination with the future is somehow less than benign, what does this mean for choice and the distribution of benefits? Braithwaite[16] touches on some of the issues here in his study of why some countries copy or model each other in a policy sense (e.g. in privatisation or defence planning). Often what happens is that visions of the future are 'sold' to government and industry planners and it is on this basis that decisions are made. Often these decisions may not be in the best interests of the modelling country.[17] In short, culture and the human condition give rise to a fascination with the future. This fascination is not without its economic and social consequences.

The second dimension giving significance to future discourse comes from what I term the ideological perspective. This perspective emphasises power and interests. Within industrial society certain dominant ideologies (or myths) prevail. These beliefs are widely held and tend to promote the interests of certain classes or groups in society. A primary example is the long-standing discourse on industrial and post-industrial society which has in recent times given way to variants such as information society and knowledge society. The sociology of these beliefs has been studied at length.[18] Debates about the future of industrial society often engender discussion of utopias and dystopias and this brings in questions of a staged approach to history (i.e. industrial society gives way to post-industrial society and so on). Just what sort of society we are moving to and how we are

getting there is at the very core of this discourse. I have discussed elsewhere some of the implications of this type of thinking and I will summarise some of the major implications and apparent contradictions which may impinge on telecommunications.

First, such discourses emphasise discontinuity—the present age is a complete break with the past since all is new. Kyrish points out

> While society is regularly treated to such previews of the future, there is a paradox in our responses to them. Unfulfilled predictions from the past seem almost embarrassingly unrealistic in their expectations of technological and social change, yet scepticism about today's technological visions is often criticised as Luddite or shortsighted. This contradiction implies that history is irrelevant—that modern times stand separate from any continuum of technological progress and change.[19]

The problem of the past and where we have come from is often conveniently ignored. As a result we are dissuaded from learning about predictive failures of the past. This problem is particularly evident to telecommunications, which is recognised as path dependent (i.e. subject to historical constraints) and paradoxically portrayed as completely new and independent of any past.[20] For example, a World Bank publication emphasises this discontinuity

> Driven by unrelenting and technological market forces, telecommunications is today one of the world's most dynamic economic sectors. Until not long ago a relatively obscure territory of interest mainly to engineers, telecommunications today is seen to be everybody's proper playing field.[21]

The implication from the above is that telecommunications today is vastly different from what it was in the past, indeed we cannot learn much from the past.

The second major implication of future discourse lies in a traditional emphasis on the role of science and technology as agents for change. In modern society, science and technology have become equated with progress and consequently discourses on the future have often reflected expectations related to new technology. As Clarke notes, it is often the most recent inventions and social changes that capture the imagination of future writers.[22] The emphasis inevitably gives rise to a strong theme of technological determinism. Technological determinism plays into the hands of the large suppliers of technology, firstly because technological systems have a degree of momentum[23] in society that is difficult to alter, and secondly because large corporations have the ability to shape, design and market new technologies in their own image.[24] Corporations have a direct interest in promoting visions of the future that will enhance their own market but at the same time obscure the values of the technological choices they are making as corporations.[25] Since telecommunications is path dependent (i.e. subject to earlier technological and social decisions) and corporations and governments take every opportunity to shape perceptions, the user is often left with little choice or at least a limited one.

Third, change and progress are common themes in future discourse. As Clarke observes 'ideal states of the future are, in fact, points on the graph of progress'.[26] Progress involves change but change for whom? The issue of who benefits from progress still remains the central question with regard to equity. However there is another more sinister dimension to change and it is worth quoting Macdonald at length who points out that change is often advocated by those least likely to change:

> Resistance to these pressures is thoroughly understandable: change, even successful change, brings disruption and uncertainty, and change is 'not always successful'. Why then, if change is so problematic, is there so much praise of its virtues. Is this simply making the best of the inevitable? Not quite. It is notable how often the most

> voluble advocates of change are the least likely to have to change themselves or to be adversely affected by change. They encourage change as they acknowledge information, as something contained within a system. This is change as the product of process, and process is firmly embodied within a system that is immune from change. This is change which is sufficiently ordered to be studied, to be modelled, to be learnt and taught, to fit into existing policy and strategy. This is change which is always constructive, which can be depended upon to make a positive contribution to organisational goals. This is the change of mission statements and vision statements.[27]

Macdonald's observations bring us back full circle to uncertainty avoidance as we can see large organisations using future discourse (which emphasises change) to try and minimise the impact on the organisation (i.e. reduce uncertainty). Likewise, future discourse can do much to secure present demand in uncertain markets.

Finally, another implication of future discourse is the scope of change. Clarke has observed that future discourse often embraces a vision that knows no bounds.[28] The entire planet is often reflected as being caught up in change and the emerging future, and scant attention is given to its limits or who may be adversely affected. Likewise, this global perspective often adopted by futures discourse makes it ripe for being promoted internationally as an 'ideal model'. Complexity is reduced conveniently.

In summary, while the future is unpredictable and best efforts must be adopted to make judgements in an uncertain environment, this is only part of the picture. The role of discourse about the future is much more sophisticated than that. Uncertainty avoidance not only gives rise to words but elaborate rituals and investments in new technology and legal systems. These investments may be only in part about reducing uncertainty. They also reflect issues of power, control and equity in a major way. They are the very stuff of policy-making, organisational planning and strategy. They operate to obscure certain issues and emphasise others. It remains now to turn our attention to what sense can be made of all this in the context of recent Australian telecommunications debates.

Interpreting Telecommunications Policy Debates in Australia

In looking at recent Australian telecommunications debates I will use the benefit of hindsight to reflect on how we might better plan for the future. This may seem the easy way out, especially since I am talking about the future. However, my focus is not how to best predict the future but rather to understand its role and how we might deal with it more constructively in the present.

In a broad sense, Australian telecommunications policy can be described as following a number of major themes, all to some extent revolving around the deregulation of the market and attempts to weaken Telecom Australia's monopoly (and now Telstra's alleged market power). This struggle has gone on for over 30 years. Debates over the introduction of an Australian Satellite System in the mid-1970s ultimately set the scene for the onset of market liberalisation in the late 1980s and eventual privatisation of AUSSAT in 1990. This was a precursor to the introduction of the duopoly in 1991 and then the opening up of the market to 'full competition' in 1997. The history of these debates has been treated elsewhere.[29] Several major themes running through these debates can be identified. I have selected competition and universal service. There are others (e.g. Pay-TV and privatisation) but I will focus on these two for my comments.

However, before doing so I wish to briefly mention AUSSAT in order to set the scene for the current debates.

AUSSAT

With regard to the outcomes of both the competitive process and the provision of universal service, one common complaint evident now appears to be a high level of dissatisfaction with the outcome of policy processes. Naturally this can be seen as a failure in policy-making and implementation but more fundamentally it means that expectations have not been met. This is not new in Australian communications policy. For example, in the celebrated case of planning for Australia's satellite system from the late 1970s, numerous groups had extolled the benefits of satellite technology but were subsequently disappointed with the poor financial performance of the AUSSAT satellite and its regulatory problems.[30] This was not only due to policy failure. On the technological front, Telecom's attitude to the AUSSAT satellite during the 1980s reflected the importance of path dependence. Telecom responded to the satellite threat by investing more heavily in terrestrial technology, an area in which it wanted to protect its heavy investments and was more comfortable. On the other hand, the advent of AUSSAT set in train a whole series of events that ultimately led to a direct threat to the Telecom monopoly. As such, unintended consequences went hand in hand with path-dependent outcomes.

Competition

Similar to the satellite case, groups such as the Australian Telecommunications Users Group (ATUG) have more recently put considerable emphasis on the benefits of competition and deregulation in their arguments against the Telecom Australia monopoly and latterly Telstra's dominance in certain markets. Given this predisposition towards unmet expectations and unanticipated consequences, one might be tempted to say that we could never get the future exactly right. However, while this may be so, there is a need to understand better the limitations of future discourse, even if it is only to explain why expectations seem to have been so high and subsequently not met.

Complaints about Telstra's market dominance and behaviour in the market abound.[31] An explanation can be partially found by reflecting on what visions or discourses of the future preceded the present set of problems. Telecom Australia's long-range planning project *Telecom 2000*, which was completed in 1975, discloses some interesting attitudes to the future that seem to be remarkably resilient even today.[32] The following select recommendations from *Telecom 2000* reflect values which were appropriate to a monopoly structure but also ones which have proved difficult to alter easily with time:

> The [Australian Telecommunications] Commission take a leading role in developing machinery to foster the harmonious development of the two sectors [computer and communications] ... (p. 22).
>
> Recognising the role that computers will have in the future widespread distribution of information, the Commission maintain[s] its present monopoly of public common carrier networks in the case of computer-communications (p. 25).
>
> The Commission support[s] the principle that separation of the telecommunications

> and data processing sectors is desirable for social reasons to limit the size and power of a large institution (p. 25).
>
> Having studied, in the course of the work, the arguments of monopoly versus competition in telecommunications, the conclusion reached is that, on balance, Australia's interests would be best served by retaining Government monopoly of public common-carrier networks. Nevertheless, there are tangible advantages of competition in certain areas that should be explored (p. 36).

While naturally only contributing a part to the present debates on competition, Telecom Australia's 'preferred future' reflected a number of things that had been treated too lightly by those who envisioned alternative futures. First, path dependency is evident. Telecom's vision of the future is certainly one that does not depart too far from a world where Telecom itself is in control of organisational, regulatory and technological dimensions. As such the process of change is envisioned from the standpoint of Telecom or at least a standpoint with which Telecom is comfortable. As a result the level of choice offered by this vision is one constrained by Telecom's interests and capabilities. The uncanny prescience of *Telecom 2000* does raise the question as to how momentum in Telecom's organisation prior to 1975 and beyond was factored into planning by others advocating more radical change. It is little wonder that some expectations of the future have not been met. In short, while attempts have been made at change, some elements of the system have been remarkably resistant. The discipline of the market and regulatory structures has been one way that various Australian Governments have addressed this issue. The fact that Telecom (and later Telstra) is a market in itself may have been neglected in the rush to expose the organisation to competition. In this regard, Telecom's history cannot be ignored as a path-dependent constraint on the outcome of current debates about competition.

Universal Service Obligation

The second area of interest is the universal service obligation (USO). This had traditionally been the domain of the Telecom monopoly but with the advent of competition the cross-subsidy issues have been separated out and considerable political attention has focussed on the definition of the USO, quality of service, coverage, how the USO is funded and how it is technologically delivered. With the possibility of Internet services, tensions between levels of service in the bush and the city have gained prominence. The means by which Internet services can be provided (e.g. 64 kb/s ISDN line) has also become an area of dispute.

Telecom 2000 also provides a clue as to how universal service is viewed. While there is a recognition in *Telecom 2000* that digital data and information services would grow, the traditional telephone service and its provision was by far the more manageable future envisioned:

> The trend already noted towards reduced hours of work should also generate a domestic demand for services which will give access to sources of knowledge, education and entertainment. The ability of the average household to pay for services is, of course, an important factor ... It is of importance in this connection that about 60% of all households have a telephone at present. In recent years the existence of a telephone service in the home has become a norm, and to be regarded as a standard entitlement in the same class as services as electricity, gas, water and sewerage. In the context of a future where a variety of educational, informational and similar facilities would be available in the home as adjuncts to the

> basic telephone service, the interests of social equity may well demand that all households should have access to them. Conceivably, social pressures could, in time, result in some form of Government subsidy to low-income households. This would greatly stimulate the domestic demand for telephone services, and the possibility must therefore be seriously considered.[33]

The future is one which is remarkably traditional with a focal point remaining on the telephone service. It comes as little surprise that in recent debates to include digital data as a universal service, the findings of the Australian Communications Authority's (ACA) report[34] on the matter has received such trenchant criticism from ATUG.[35] ATUG's main complaint is that the ACA report places too much emphasis on market forces and its recommendation that government should not mandate ISDN as a universal service essentially plays into the hands of Telstra by protecting its already heavy investment in the analogue local loop. In summary, what is at stake here? From ATUG's viewpoint, Telecom the public monopolist has merely reinvented itself as Telstra the part-private dominant competitor. Misguided regulators and governments have wittingly or unwittingly facilitated this transition. From Telstra's viewpoint, its regulatory environment has changed considerably but it is still focussed on control and protecting that control (be it in the political arena or the market). What have not changed are those path dependent elements (of which technology and management attitudes must be included) which make Telstra resistant to change. Consumer and user groups interpret this with disappointment since their expectations have not been met. Policy has failed to deliver. The casualty, however, (apart from unmet expectations) seems to be the ordinary citizen (now customer) who was supposed to be protected by universal service regulation. Without making a judgement on whether the regulation itself is stronger or weaker after change, it is the customer that has to share the burden of uncertainty now. The burden of uncertainty is, as a result, shunted around with obvious political consequences.

The main point is that today's decisions about digital data, no matter how optimistic certain user and consumer groups are about the significance of the need for ISDN into the home, are constrained by Telstra's previous history. As such, people have a choice but only a limited choice. In this case the argument of market forces has conspired to prevent these aspirations being met. If we are to look back to the *Telecom 2000* report, similar sentiments seem to prevail as well. The risk for Telstra is that while the ACA decision favours its own network exploitation plans, the rest of the world is changing. Telstra's inability to respond to change could make it vulnerable if it too does not recognise that it may be locked-in to ways of doing things that could be inappropriate for a changing market.[36] My point is that outcomes of present debates can be partially understood if enough attention is given to path dependency and the limitations of choice that that gives rise to.

Conclusions

The point of this paper has been to make some sense of discourse about the future in order to shed light on some current telecommunications issues. This is of course difficult since making such connections requires a more detailed historical analysis than the assertions of this paper. Some observations can be made however.

First, even though the future is unpredictable, it is important to recognise that discourse of the future will play and continue to play an important role in shaping the way we look at problems. While part of this may be aimed at reducing uncertainty, an important element revolves around path dependency and the desire of powerful organ-

isations to do what they can to shape the future they prefer rather than provide a future that has a wide range of choices. This narrowing of choice inevitably puts means before ends and it becomes a difficult task for user and consumer groups to alter their trajectory. Policy-making needs to incorporate these considerations to a greater extent than in the past. This is especially so in selecting technologies at the earliest stage of adoption since these tend to limit choice once they gain a degree of momentum.[37]

Second, the success with which we not only predict the future but recognise the role of such discourse will be vital for how well an economy organises itself to meet new challenges. This attention to organisation, at both government and firm level, seems to be neglected. Governments and firms need to learn in a new environment and mechanisms need to be established to promote this. Visions of the future are all too tempting to be constructed from the standpoint of the present market incumbent or ruling government. The tragedy is that new information sources, often external to the organisation, can be neglected or misinterpreted. Likewise, opportunities to learn and gather information (such as independent research organisations or initiatives) are all too frequently subsumed within market research or cost cutting. To a greater extent these days, even within universities let alone government, more probing and critical research questions are side-stepped in favour of easier paths or more lucrative options.

Future discourse will play a role whether we like it or not. Unmet expectations are likely to continue unless adequate recognition is given to a more sophisticated view of the future. This really is a question of designing organisations for the information age rather than for short-term operational goals.

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