

MILLENIUM METROPOLIS

**The Impact of New Telecommunications Technology
On
Urban Form and Location**

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ABSTRACT:

The eastern states of Australia suffer a problem of centralisation of population growth in the principal cities of Sydney, Melbourne and Brisbane. Historically this growth has been at the expense of rural areas but in more recent times it has been significantly expanded by overseas migration as a rapidly increasing component of growth.

Sydney in particular is located in a part of New South Wales which provides a relatively restricted area for urban development and this sets a potential limit on the population that can be accommodated, if current trends are to continue. In this city, at present, population growth has been responded to by a continuation of peripheral growth and more recently by efforts to encourage redevelopment referred to as urban consolidation.

Urban consolidation depends on the availability of suitable land and this has been found generally in the form of obsolete industrial sites. In the case of metropolitan Sydney, much of this easily converted land has now been used to accommodate a significant number of residential flats. With the waning supplies of usable industrial land, peripheral growth has once again come to predominate as the response to demands for housing. Urban consolidation has also generated high levels of citizen discontent and antipathy to taller and denser residential flat accommodation located in existing suburban areas. This has created a number of intractable problems for urban planners.

This paper explores the potential of new telecommunications technology to allow revisitation of a planning approach that was tried 30 years ago with relatively little success, decentralization, as a means of meeting the problem of population growth of Australia's principal cities.

1 INTRODUCTION

At the risk of appearing somewhat parochial in approaching the question of urban growth and change as mediated by new telecommunications technology, Sydney represents an emerging global city which because of its site limitations, successfully emphasises the underlying problem that needs to be met: a long-term global trend to significant population growth as increasingly reflected in a limited number of world cities. Apart from that however, as the author's adopted city since 1965, it therefore represents a convenient and accessible model. However, more importantly, over the last 50 years, Sydney has come to be a focus of population growth in Australia. (Searle, 1996) With its emergence as a part of the global network of significant urban centres, this trend is not seen likely to diminish in the future.

During the last 100 years, Sydney has progressively expanded with housing located ever more distantly from the old business district adjoining Port Jackson to the east. Until the end of the Second World War, the pattern of Sydney's urban growth was generally radial in character and followed the lines of the railway system. However with the emergence of the automobile as a progressively more important mode of private transportation for access to work, the spaces between the radial arms began to fill up with housing, a process that has continued to the present day. (Ashton, 1984)

This pattern of growth involving progressively greater geographical distance and inevitable social dislocation of families, came to be seen as thoroughly undesirable and in the

Cumberland Plan of 1952, explicit steps were taken to arrest this trend. However, the technique of introducing a “green belt” as a form of constraint to growth, could not resist the pressure for development of land either by hopeful new residents or by the landowners.

However the land available for urban development lying to the west of metropolitan Sydney and towards which the city continues to grow, is by no means of unlimited extent. Bounded on its western edge by the waters of the Hawkesbury Nepean river system and the escarpment of the Blue Mountains, this part of the Cumberland Plain appears to have the capacity for an additional 1.5 to 2 million persons based on studies carried out somewhat over 10 years ago. (Daly, 1991) In more recent times, this capacity has been the subject of further consideration as the implications of threatened fauna requiring conservation has become necessary. In particular, the emergence of Cumberland Woodland as a residual threatened species has suggested a major reduction in the potential capacity of this part of metropolitan Sydney to accept population. With the excision of areas requiring explicit protection, it seems likely that the ultimate population capacity of the Cumberland Plain may be in the vicinity of 5 million persons.

The State Government response to this situation has been to promote the notion of urban redevelopment now commonly referred to as urban consolidation. The inherent limitations of such an approach are discussed in the next section. However, on the basis of the physical limitations to urban growth imposed by the extent of the Cumberland Plain and previously discussed, this approach is limited in the longer term. On the basis of present trends, a time of crisis can be confidently anticipated some 20 years in the future as land supply is inevitably exhausted.

Quite apart from the problem of diminishing land supply associated with obsolete industry, unsympathetic residential redevelopment in existing suburbs has generated a serious problem of citizen dissatisfaction with this form of development and a major groundswell of opposition in many inner metropolitan council areas.

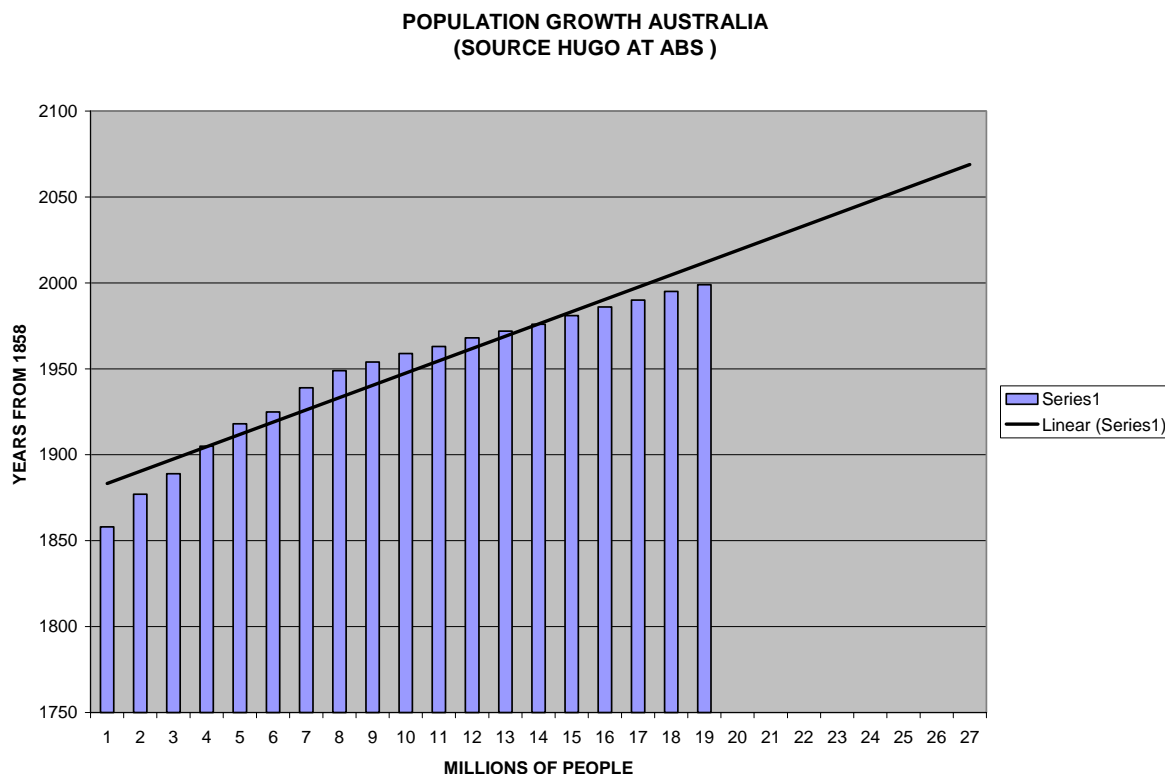
These various pressures around Sydney conspire to leave the State Government with few palatable choices if a reasonable and environmentally tolerable metropolitan region is to be created by 2020 assuming that the approaches now adopted continue to guide the form of development of the city. However, a historically interesting but generally unsuccessful approach as employed in Australia, remains to be revisited. This is urban decentralization, preferably on a selective basis, and a number of New South Wales regional and rural towns seem to be potentially suitable for such a process of expansion.

The reasons for earlier failures to achieve successful decentralization of population from Sydney, Melbourne and Brisbane are numerous and have been extensively examined in the planning literature. What however is clear is that a key element in the failure was the absence of substantial sources of employment for the relocated population. In particular, such earlier attempts at decentralization hinged around persuading industry and commerce to relocate away from the major metropolitan regions.

2 POPULATION GROWTH

Evidently a key issue in precipitating this problem in a city like Sydney, is population growth now fuelled by overseas migration (both legitimate and otherwise). Australia has been admitting approximately 100,000 persons per annum over a protracted period and on the present basis of growth, is likely to reach a metropolitan regional population of six million

over the next thirty years. In a country the size of Australia, this might not seem to matter that much. However, the problem of this consistent long-term trend to increasing population is that the bulk of it accumulates in the Sydney Region. As previously observed, there is an explicit limit to the size of the site on which the metropolis stands and from this inevitable circumstance, problems will arise which will have to be solved over the next 30 years.



Source: ABS 2001

Figure 2-01 Long term population growth trends in Australia

It may be asked, “Is the problem of population growth inevitable: Could not the Federal Government simply determine that no further migration should be allowed”? Given the problems that arose over the “boat people”, such a proposition seems intrinsically unrealistic. In any case, with an ageing population, Australia will depend more and more on migration to support the way of life that Australians have come to expect. However, quite apart from this, it seems apparent that while the resource consuming and rich western societies are tending towards reduced fertility and constrained population growth, other parts of the world which do not share these benefits, are increasingly fertile and a source of desperate migrants seeking a better more peaceful way of life.

Upon whatever basis population growth may impinge on Australia, it is clear that there is an inevitable tendency for migrants to coalesce around the major cities and Sydney in particular. Given the very substantial component of population growth that is associated with migration and revealed in the attached diagram, **Figure 2 - 02**, on the basis of current trends it can only be anticipated that Sydney’s environmental problems are likely to get progressively worse. As previously observed, physical limitations to the extent of the metropolitan region seem likely to become painfully apparent during the next 30 years.

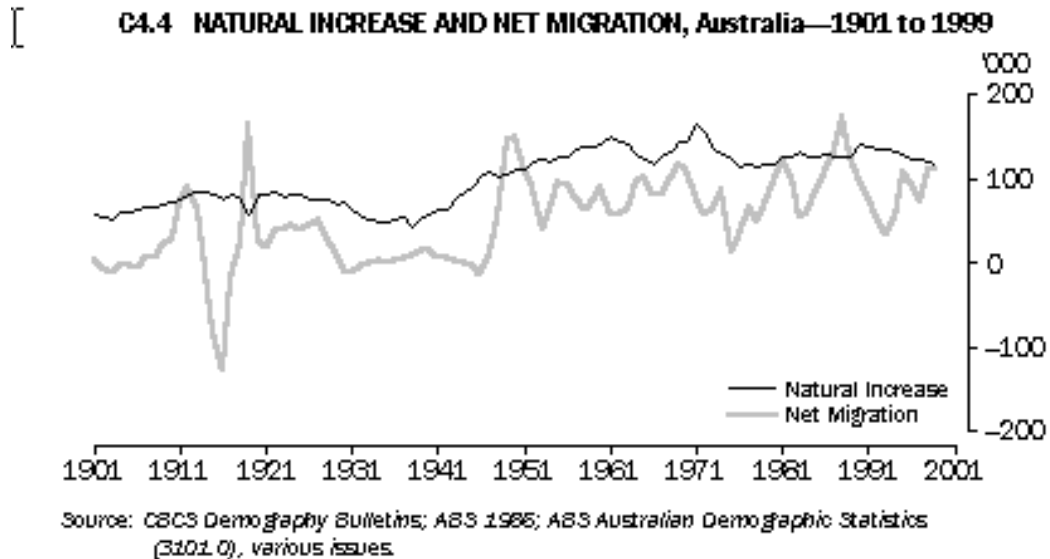


Figure 2-02 Component of migration in relation to Population Growth in Australia

Telecommunications in particular has brought the richness of Western society to the attention of those impoverished members of world society and one can hardly expect that in the longer term such disparities of wealth will be happily accepted without enormous strife ultimately arising. The present trend to uncontrolled and perhaps uncontrollable relocation of asylum seekers seems very likely to continue into the future as such necessities as food and water become progressively depleted by the demands of an ever-growing population. In this scenario, it seems inevitable that apparently under-populated countries like Australia and New Zealand, will become the target of an increasing demand for living space. This demand also appears to be associated with a trend towards population concentration in the principal cities where work and relatives are to be found.

In attempting to solve the problem of escalating population in large cities like Sydney and Melbourne, the new way may involve going forward to the past and realizing that dispersal of population to rural localities may be the only rational solution. In spite of the earlier lack of success, technological change may be about to provide the impetus that was lacking in 1970 when this sort of approach was attempted previously in Australia.

3 PLANNING IN NSW – THE CURRENT APPROACH

Over a period of perhaps 20 years, Sydney for a variety of reasons, has grown into prominence on the Australian mainland as its most populous city and at present the only candidate for classification as a global city. This well-established trend was no doubt reinforced and consolidated by the 2000 Olympic Games which in retrospect, was immensely successful in exposing the city on Port Jackson to world gaze. One might almost assume that as in a nuclear reaction, the city has achieved “critical mass” from forces both within and pressures from without and is likely to continue to expand until some form of constraint arises to arrest the process. As noted above, this is likely to be a geographical restraint imposed by the Blue Mountains and the Hawkesbury Nepean River system.

As a city, it is apparent that Sydney has proved irresistibly attractive to many of the migrants that arrive at Australia's shores and this can be inferred from the attached figure which compares the growth of the metropolitan centres with the rest of the Australia.

C4.43 POPULATION DISTRIBUTION, Metropolitan, Non-metropolitan, Other Urban and Rural Sectors—1901 to 1996

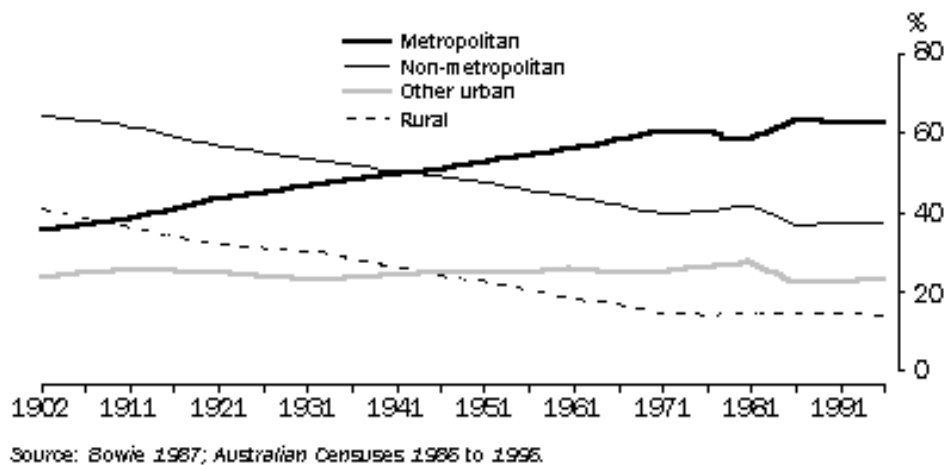


Figure 3-01 Comparison of population growth in Metropolitan and other regions

Concern with the apparently inexorable spreading out of the Metropolitan region is no new phenomenon in the context of Sydney. It was the basis of a specific measure in the County of Cumberland planning scheme of 1952 designed to arrest “sprawl” with all the social problems that had become apparent in that form of housing development: this was the “green belt”.

While the mechanisms of a constraint contained in the County of Cumberland Plan have long since been abandoned in the face of owner pressure coupled with housing demand, the successor to this plan created in 1969, The Sydney Region Outline Plan (SROP) has continued to influence the form of metropolitan growth up to the present time. While the strategic approach contained in this document and the structural outline that it drew for future growth has been overtaken by less physically orientated statements of strategic objective, the radial legs of growth running west to Penrith and south-west to Campbelltown, Macarthur, continue to be clearly recognisable in the metropolitan structure. (State Planning Authority, 1968) However, in more recent times a new radial growth corridor to the north-west is developing rapidly having been foreshadowed in the SROP nearly 35 years ago. For a physical planner, this is a comforting indication of the power of the plan as opposed to the current dependency on the written word to present planning objectives.

What is also apparent in more recent peripheral expansion of housing is a tendency for the spaces between these radial development arms to be filled in by new housing accessed by a motor car rather than the rail system which applied to the earlier growth areas. The new north west sector is substantially dependent on private motor vehicles although some attempts to introduce dedicated high-speed bus routes have been undertaken. This process of infill seems likely to be escalated by the introduction of the new Western Sydney Orbital together with an important link in the Lane Cove Tunnel project. In this respect, examples to be found in the United States such as Boston and San Francisco suggest a progressive and relatively rapid

expansion into the western regions of the city is likely to occur once the new route is completed in 2007.

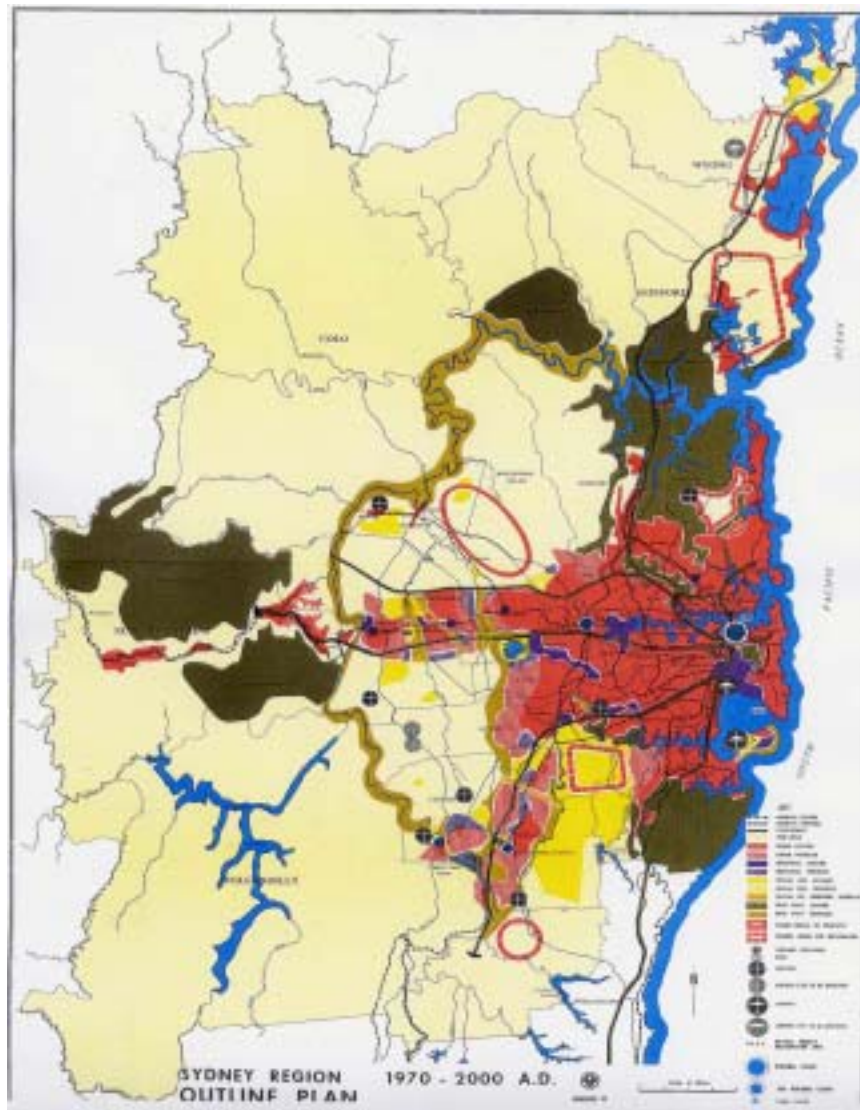


Figure 3-02 Sydney Region Outline Plan 1969

In New South Wales the answer that the State Government has given to the problem of centralisation of population growth around Sydney, has been to introduce the old idea of a comprehensive redevelopment in a new guise and now known as urban consolidation. The notion that the more efficient use of urban land in relation to existing services has proved irresistibly attractive to successive state governments. Until recent times it has proved a reasonably efficient way of providing new housing in the form of residential flats and town houses as an alternative to the march of low density ever outwards around the periphery of the metropolitan region.

The crucial issue in responding to demand for new housing by this method is that there is sufficient suitable land existing within the metropolitan umbra. In the main, what has been the basis of urban consolidation is obsolete industrial land which has become available with the relocation to more accessible places away from the centre of the city. However, obsolete industrial land seems to be a significantly diminishing resource. While over the preceding 15

years, this type of land has provided for almost 70 per cent of new housing, (Dept. of Urb. Affairs and Planning, 2001) in the years to come it has been speculated that the 30/70 proportions of perimeter housing to urban consolidated accommodation is likely to reverse.

In a recent round-table discussions convened via the Planning Research Centre, an organ of the University of Sydney, State Government planners acknowledged the probability that peripheral growth is likely to expand very rapidly over the next 10 years as the means to respond to housing demands. Again this has the implication that Sydney will reach its limit capacity a good deal sooner than later.

While the foregoing appears to involve seemingly irreconcilable problems, there may be one other option which perhaps for historical reasons has not been given much consideration, if any, in recent times. This is the notion of “decentralization”, meaning the dispersal of population away from existing city centres to new rural locations or to centres selected as potential growth centres.

Since the failure of decentralization projects in 1975 in Australia which were designed to combat the undesirable features of sprawling and apparently uncontrollable growth in the principal metropolitan regions, efforts to contain the outward pattern of growth has largely been met by the technique of urban consolidation described above.



Figure 3-04 Cumberland Plain

Figure 3-05 Sydney “Sprawl”

At the risk of repetitiveness, Sydney has an endemic problem of space and ultimately a limited area available for housing which the above illustrations demonstrate. Already the remaining areas to the west are being steadily eaten into as housing spreads out to the physical limit previously described. Compounding the problem of population growth, this is occurring at relatively low density at around 10 dwellings per hectare.

4 PLANNING FOR THE FUTURE

As a matter of fundamental principle, having regard for what the future may hold would seem to be a fundamental attribute of the profession of planning. However in more recent times, the future appears to be regarded by most planners as something so intrinsically intangible that all one should do is try to manage the emerging situation without taking a long ranging view of where we may be going. This approach, encapsulated in the word “Incrementalism”, has been an unfortunate diversion from a more constructive approach to the process of planning.

This is seen as a most regrettable development because rational and systematic methods for anticipating future events were developed during the 1960s and applied with considerable success. Some of the success was in the area of predicting the outcome of future military action and no doubt this contributed to an element of distaste for such methods amongst professional planners.

Referred to as “Future science” or perhaps more elegantly “Melontology” (from the Greek words for future and science), this branch of planning and management has provided a reasonably sound basis for considering the most probable directions of change which are likely to affect society. The procedures of Melontology are equally applicable to the process of strategic thinking which is appropriate to dealing with significant urban change as is currently found relating to the pressures of population growth.

A particularly valuable technique of Melontology involves the process known as “trend analysis”. Among other matters, this approach relies on a sound working knowledge of contemporary technological change and scientific discovery. Inevitably such an approach must, to some extent, involve extrapolation of current events. If undertaken uncritically, such an approach has to be seen as intrinsically dangerous, particularly where technological changes are occurring with great rapidity. Despite this, a structured and consistent approach to examining the likely future path of development with concern for current trends, is seen as a generally useful basis for strategic planning. Certainly it is far more useful than adopting what might be termed the “Micawber” approach in planning. As the impoverished Mr Micawber was prone to exclaim in contemplating the future, he was just “waiting for something to turn up”. (Dickens, 1917)

During the last few years, the tools of Melontology and of computer based modelling have been bent to an examination of modern telecommunications and its capacity to change the complexion of not only existing cities but the possibility that population may be able to be accommodated away from such traditional centres of attraction.

What has become clearly apparent in this work is the capacity of apparently small events to unleash a Tsunami of change over the longer term. But one example of this can be seen in the invention of the Transistor in 1947. (Riordan and Hoddeson, 1997) This device, an outcome of the scientific assault on the problem of understanding the inner workings of the atom resulting in quantum theory, very quickly became the fundamental component in the creation of the computer industry. Ultimately this solid-state device led to the integrated circuit and to the microprocessor which has allowed almost anyone to have a little computer on their desk. More significantly still, in the linking with telecommunications technology, this has precipitated the revolution that has commenced with the widescale use of the internet. (Campbell-Kelly and Aspray, 1996)

As a partial prelude to the next section it is appropriate to note that another useful attribute of Melontology is to reveal the extent to which human behaviour tends to be repetitive and founded in deep-seated social mores. While technology provides the tools for achieving enormous change, ultimately, society seems to have considerable capacity to control how such change will occur. Perhaps it can be asserted that this inherent flexibility of mind and underlying consistency of social purpose is what has made humanity the way it is and will allow harmonious development in the future when there is so much pressure for chaos and decay.

5 HYPERCOMMUNICATIONS - OPPORTUNITIES

One of the key components of the burgeoning contemporary infrastructure of global information, the Internet, had its direct analogy in Victorian times (from 1840 on) in the network of telegraphic links that were created first on land and ultimately between all the major continents of the world. The foundation of this Victorian internet could be seen as deriving from the work of Samuel Morse in his creation of the first functionally useful telegraph in the USA. (Standage, 1998)

It is a significant irony that this remarkable invention was to be founded upon a very human personal tragedy in Morse's life: the death of his wife while he was far away from home and involved in a painting commission. The news of this event did not reach Morse for a considerable period and it appears that the notion of using electricity to convey information on an almost instantaneous basis was his response. Thus the communication revolution that is with us still, had its genesis in the need for immediate information and news. It is seen as highly significant that in 2003, this motivation for the use of telecommunications still propels is growth and technological change and in this, it is clearly responding to consumer demands for instant news, entertainment, personal contact and information.

What is of considerable interest in a historic sense is that the implications of this technological development for the longer term were grasped in that same period by the writer, Nathaniel Hawthorne who, during the 1850s, was to observe:

“.....by means of electricity, the world of matter has become a great nerve, vibrating thousands of miles in a breathless point of time.... the round globe is a vast.... brain, instinct with intelligence!” (Leer, 2000)

Close observation of the technological fields of telecommunications and micro computers over a protracted period (Jensen, 2000) coupled with more recent scanning of relevant literature in these fields, suggests that their conjunction, in what has been conveniently described as hyper- communications, is about to create profound changes to the way people live and work in urban and rural society. In this regard, the words of Hawthorne are likely to see their most profound expression as a fully networked world provides the connections between individuals that mirror the synapses in the human brain.

In the last seven years the most obvious manifestation of this impending change is the rapidity with which the Internet has found its way into business and private activities throughout society. At one time, the “killer application” was provided by the fax machine which produced an extraordinary change to business practice and the way that information and graphical material were passed around. Within just a few years, the Fax machine has become close to obsolete as more and more material is distributed by e-mail and its

attachments. At the present, one of the limitations to this process is bandwidth of the available connection which can constitute an intolerable constraint to the passing of large graphical files or CAD generated data files. While the 56 K modem remains a common attribute of most households and broadband fibre-optic cable or ADSL via the old copper cable network, the domain of business, the passing of images of any size will remain the prerogative of the rich.

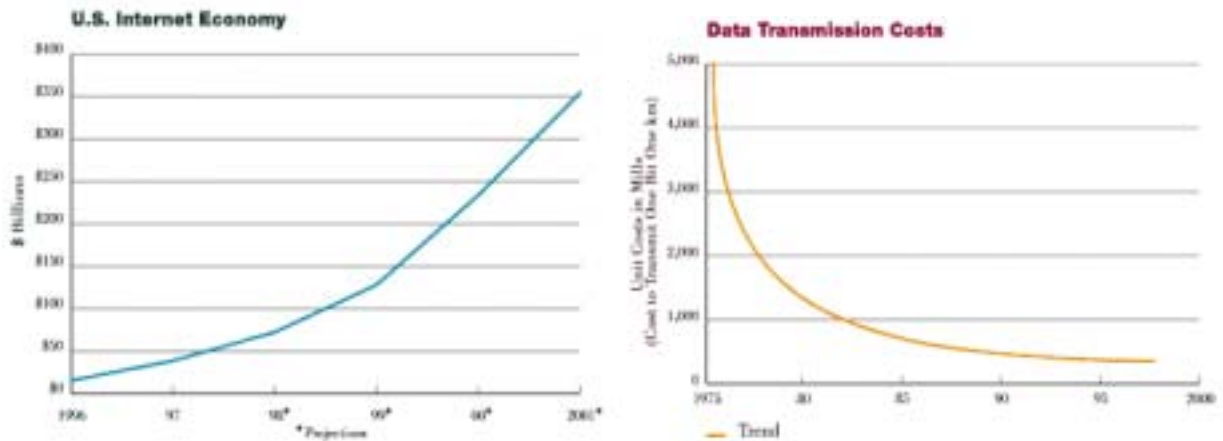


Figure 5-01 Internet activity versus cost of access in USA 1996-2000

Based on contemporary experience in the USA, it can be confidently predicted that this constraint to the transfer of images, both static and part of audio visual forms of communication is in the process of disappearing as demand slashes the cost of access to this service. This can be seen in the above diagrams and although it has not been tested analytically, it may well be that a reciprocal form of Moore's Law applies to the cost of Internet access. It will be remembered that in the early days of computing, this law was propounded and stated that every 12 to 18 months the power of solid-state central processing units would double. For the last 20 years or more, this prediction has accurately reflected the changes that have occurred and it is only very recently that the growth curve has tended to become asymptotic as the atomic and quantum limits of miniaturization have been approached in the fabrication of solid-state devices.

A particular feature of the Internet as it is rapidly developing is that it has the capacity to permit face-to-face, real time conversations between people in all corners of the world. While the importance of direct physical contact seems unlikely ever to be entirely eliminated, implications for both business and social activities seem to be quite profound. In this context the relevant literature and papers available on the Internet, reveal that most of the experts tend to align themselves at one or other of the extremities of what might be termed an "impact" spectrum.

At one end of this spectrum are aligned what might be described as the reactionary and somewhat Luddite attitudes which see technology as unlikely to produce any significant change to the way humanity operates. By contrast, at the other end of the spectrum, are arrayed those that see extraordinary changes as the inevitable consequence of the burgeoning technology of hyper-communications. In this second group the attitude is neatly expressed in the title of one of the proponents of change, "The death of distance". (Cairncross, 1997)

Somewhere between these two extremes is considered to lie the probable future that will be generated by the impact of this new technology. At the risk of being branded as an equivocator, the author has to acknowledge that it is to this centralist position that he has ultimately arrived. That does not mean, however, that major urban changes of the sort that are associated with decentralization, are not expected to occur based on the technological changes that are on foot. On the contrary, it has been concluded that the potential complexion of future urban New South Wales is likely to involve an electronically networked system of rural cities, with Sydney remaining as the dominant global entity linking the satellites to the rest of the World economic community.

If this is seen as a fanciful notion, then the research currently being undertaken in the USA, described as involving "Immersion", is seen as a relevant prelude to what will be possible and likely to be seen as commonplace in perhaps only 10 years' time. (NTII, 2000) As the illustrations demonstrate, face-to-face contact with not only single individuals but in group working, has now become possible even from the home office personal computer. At the present the only inhibition to the wide scale adoption of this facility is the absence of generalized broadband connections which tend to restrict the process to local area networks as found on university campuses. Again the reciprocal of Moore's Law is likely to apply to this situation with the consequence that demand will tend to be met earlier rather than later. This is anticipated to have profound consequences for the way that many businesses tend to operate and in particular allow the dispersal of business on the basis of less expensive land being used for activities that do not need to rely on the benefits of a central city location.



Figure 5-02 Audio-visual Communications via Internet and Immersion

6 POPULATION DISPERSAL AND HYPERCOMMUNICATIONS

An interest in history and a breadth of reading in that topic area soon reveals the remarkable consistency of human social attributes and mores, over a very long time span. In particular, examining the history and writings of the Romans in a period two millennia before modern times, reveals the striking similarity of tastes and attitudes that applied then as compared with what would be considered conventional today.

What does inevitably separate us from the Romans is the extraordinary rapidity and complexity of technological change that has occurred in the last 200 years to the present.

However, in most other respects, a citizen of the modern world would be generally comfortable in Roman society and find its mode of living and social habits not at all unfamiliar. (Gibbon, 1963) Perhaps the outstanding exception to this generalisation would be the thoughtless acceptance of slavery in Roman society, on the one hand, and the savage enthusiasm for public entertainments involving wild animals and Gladiators, on the other. By the same token, a modern football crowd can often sound as savage and mindless as any crowd of spectators who occupied the Coliseum 2000 years ago.

The key similarity that links us to our forebears is a preference for face-to-face meeting and discussion and this has persisted up to the present time despite the availability of other means of communication which allows great distances to be bridged. This preference could be seen as raising the most basic element in determining whether in the future, activities that require immediate human proximity can be undertaken remotely via an electronic system of communication. With one very obvious exception, it appears that the quality of linkages between people via electronic means, is rapidly moving towards a situation where the artificial is indistinguishable from the real. Perhaps in the future, even that last essential area of human contact will diminish in the face of what has been called, "Tele-dildonics"!

Over a protracted period, the human preference for gathering together in towns and more recently, cities, has been evidence of the usefulness to human society of proximity in carrying out social and business transactions. With such a well established form of structural and social organization, the question that has to be posed in considering afresh the possibility of decentralization is, "What is likely to be an attraction that overcomes this preference of people for gathering in certain central places". The short answer is anticipated to involve whether sources of work are available. This will continue to apply until such time that, like the Eloi in H G Wells "Time Machine", (Wells, 1895) the vast bulk of humanity is supported by the few industrious Morlocks, without the need to work at all.

In this context, it is worth remembering that the Morlocks dined on the Eloi so not all was pleasure in the Garden of Eden-like future world that Wells anticipated for his hero's travels.

The availability of work must be seen as directly associated with work producing enterprises and it is here that a very significant change can be seen to have occurred since 1972 when decentralization was last tried in any significant way in Australia. At that time, work depended in the main on traditional forms of tertiary industrial production with factories creating the consumer goods that were demanded by the public. The notion of "weightless goods" that now has arrived with the computer age, was scarcely envisaged although a few enlightened persons saw what lay in the future. In particular, Galbraith writing in that period, clearly anticipated the decline of conventional work as the computer came to displace more and more routine clerical and middle management tasks.

Just in the last few years, it has been possible to see a new stage of this prediction coming to fruition as even the stenographic and transcription typist is about to be displaced by Voice Recognition software. It will be no surprise that this paper has been dictated directly to the computer without any arguments about setting out or spelling that in the past have applied when using a human assistant. However, spelling is distressingly American in flavour if the computer is given half a chance. It tried very hard to persuade the author to write "flavor" not "flavour" in the last sentence, for example.

In the meanwhile, a whole generation of middle management has been displaced in the computer based upheavals that have occurred over a 20 year period as more and more business comes to rely on micro-computers to do so much that previously was done by

middle managers, clerks or draughtsmen. Now top managers are likely to have to type their own letters and reports in the future or they may tend not to get done at all. This make VR software likely to be the next “killer application” when its power becomes commonly understood. In making this prediction, the author confesses to a certain bias through direct association.

Thus one part of the equation that determines the possibility of decentralization depends on the changing complexion of work that will allow production to be useful at a distance and not necessarily require the transfer of physical artefacts from place to place in order to create value in an economic sense. However, the other component of decentralization is seen as continuing to involve access to goods and services. Given the problem of distance that is found in Australia, this inevitably means access to an efficient airline system. Evidently, while consumer goods can be ordered quite efficiently over the Internet, transportation is needed so that the goods can be received. Apart from this, the atavistic tendencies that make face to face meetings so attractive as discussed earlier, also will demand that personal travel continues. Again a good airline service will remain an essential feature of any distant location selected as a site for a new town or an existing town for enhanced growth even if other forms of advanced terrestrial transportation become available such as the Very Fast Train, VFT or what the Europeans usually refer to as the TGV (Tres Grande Vitesse)

No expectation of the long term decline of the Global type of city is held by this author. By contrast, with access to enhanced communications facilities that will be available in the Internet and later with Hyper-communications, what is seen as likely to arise is a new form of dispersed and electronically linked array of urban places.



Figure 6-01 Boston “beltway”

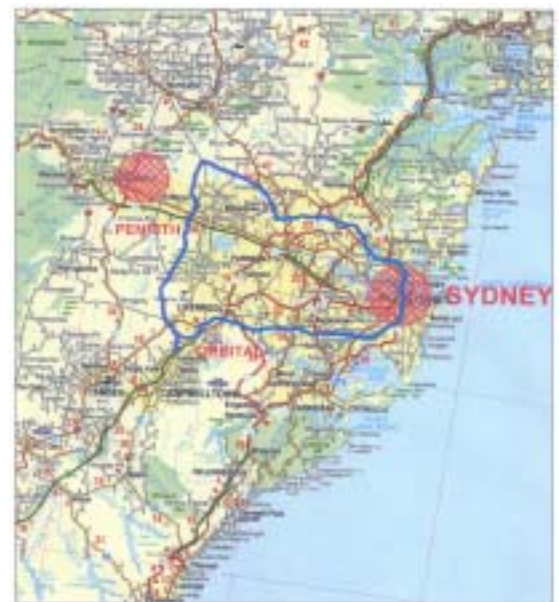


Figure 6-02 Sydney Orbital route

In a rather chaotic way, this is very much the complexion of urban and rural development that has occurred in the USA over the last fifty years and is particularly apparent in the belt of urban and semi-urban development that now runs from Boston in the north east to Washington in the south west. It is also clear that access in the form of “beltways” in the

Boston region has created the means for electronic and other “clean” industries to move out to the rural hinterland of the city to the west. This is a process that is anticipated to occur with the completion of the recently approved Western Sydney Orbital which will revolutionize access to the western part of the Cumberland Plain.

Apart from the possibility of generating work at decentralized locations, one other key element in the selection of potential new towns or growth centres is the type of environment that exists. This appears to have been one of the issues that was instrumental in undermining the decentralization efforts of the 1970s.

As is well known, Australians have always shown a preference for living close to the edge of the continent, presumably for environmental reasons. This may be directly related to the climatic conditions found away from the edge of the sea but it has undoubtedly contributed to the emergence of the major cities as maritime places. The sole exception is Canberra but this was largely an artificial construct which was assisted in its defiance of natural preferences by Government action and the application of large amounts of taxpayer generated revenue.

When decentralization was a popular concern of the States in the 1960s, the Department of Decentralization in New South Wales, consistently supported the idea of decentralization to coastal locations. When the Federal Department of Urban Development sat to decide the preferred locations for growth centres in 1972, this was ignored and instead, inland locations were selected. It might be concluded that the overall lack of success in moving any significant level of population away from Sydney or Melbourne was as much to do with this factor as it was to do with the problem of jobs availability. Albury / Wodonga and Bathurst / Orange have failed to achieve even the natural growth that was anticipated in 1972 let alone the enhanced level of population that was hoped to be achieved by promoting these towns as growth centres for decentralization. (Lloyd, 1990)

In any fresh attempt at rural decentralization, environment will have to be a significant consideration in any process of site selection. This is seen as likely to promote coastal locations as the inevitably preferred target for relocated urban citizens. Already this preference is well developed in the attitudes of older persons and those wishing to escape the pressures of urban living so aptly captured in the recent ABC “soap opera”, entitled “Sea Change”.

7 DECENTRALIZATION IN NSW – THE THIRD WAY

As earlier discussed, at one time decentralization was a favoured approach to planning for population growth in New South Wales. As had been the case overseas, it was seen as a means of avoiding the social problems that appeared to follow in the wake of perimeter growth in Australia's big cities. In terms of relocating substantial numbers of persons from Sydney or Melbourne to new rural growth centres, the decentralization efforts of the 1970s were an expensive failure which may well have soured attitudes up to the present time. This is seen as a regrettable because the current approaches, involving redevelopment of the existing urban areas on one hand and a continuation of perimeter growth on the other, are ultimately incapable of responding to the inevitable constraints that Sydney faces in the longer term.

In this general context, an issue that has come to be of major concern is the “sustainability” of Sydney as an urban place, given its probable environmental impact on what remains of its

site on the Cumberland Plain. Given the general thrust of what is presented in this paper, it is appropriate to record that there are significant supporters of continued urban redevelopment as the way ahead for New South Wales. In his paper of 1999, Newman argues that the impacts of urban expansion that are occurring can be seen as justifying additional efforts to “consolidate”. This he proposes as an appropriate way to reduce urban sprawl. (Newman, 1998) However, this is seen as an approach that rather tends to ignore the realities of public antipathy to higher density redevelopment, referred to earlier.

While it would be a very gratifying to be able to say that the case for urban decentralization based on the new and rapidly developing features of hyper-communications can be proved, the reality is that observable trends alone can be looked to as an indication of where things are likely to go in the future. However, when the remarkable facilities of modern telecommunications that have already become available, are seen in the context of the enhancement of personal communications that has already been tried but is effectively still in the laboratory, the potential to change the way that cities grow in the future and the capacity to allow growth in dispersed locations seems reasonably certain.

Quite apart from the dilemma of uncertainty in this context, there is a further fundamental question that must be answered. This concerns the availability of suitable rural towns or areas of land with the capacity to absorb significant numbers of settlers. In this regard, it is possible to report that at least three locations on the east coast of New South Wales appear to meet the relevant planning criteria associated with absorbing populations of over 250,000 persons. In the interests of not creating a flurry of land speculation, it is inappropriate to specify in explicit detail the location of the sites that have been identified following the author’s reconnaissance in recent months.

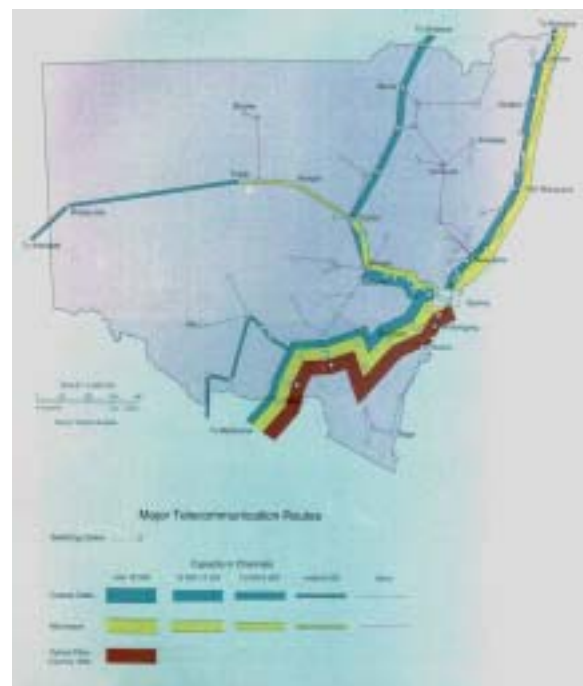


Figure 7-01 The East Coast Network Figure 7-02 The NSW “Backbone”

What it is possible to say is that the Great Dividing Range and its proximity to the east coast of the State have inevitable consequences in limiting the available sites as has been revealed

by direct inspection. However, the rural towns identified in the above diagram as part of a proposed dispersed communications network, inevitably tend to suggest in a general sense where land is likely to be found if anyone is disposed to carry out the same exploratory exercise as the author.

In this same context of potential growth centre locations, it is no coincidence that the town network proposed could be seen as closely associated with the main telecommunications trunk route or “backbone” as it is commonly called.

8 GENERAL CONCLUSIONS

As history successfully demonstrates, anticipating the future is one of the most frustrating activities and further, it is directed at the most elusive of concerns. In such an exercise, the clearest trends have a habit of being displaced by new and unexpected developments that tend to arise with ever greater frequency in our technologically driven age.

However, the current trends in telecommunications, that should now usefully be referred to as Hypercommunications, are consistent with long standing human preferences for high quality personal contact. This technology is rapidly approaching a capability to allow face-to-face contacts that are indistinguishable from the real experience except for the ability to make “touch” contact.

Already business operations have embraced this new phenomena and tele-conferencing has been able to achieve enormous savings in air travel costs foregone. This is entirely consistent with the basic urge of business to maximise profits by minimising costs of operation. In this regard, the cost of land represents a major element in any city based operation and the capacity to move to less expensive land in a rural area should prove irresistible, provided such a move does not impose contrary economic penalties associated with geographic location.

Inevitably, given that it is the future that is being considered, proving that decentralization will occur because of the availability of Hypercommunications, is not expected to be possible. What can be demonstrated, however, is that current trends appear to make this possibility very real and therefore, a consideration of the implications of such dispersal are appropriately considered now, rather than waiting for the pressure on the coastal regions to build up so as to be almost uncontrollable.

The ultimate intention of this paper is to raise awareness of an old response to population pressure around Australia’s major cities that may well apply to New Zealand too, if world population growth continues to follow the present trend. Decentralization is seen as a process that deserves to be brought out of the closet of planning ideas and considered very carefully in the light of major pressures that are building up not only in the Pacific Rim but around the world. Hypercommunications is seen as part of the potential justification for such a re-examination and the new element that may supply what was missing when previously tried just over 30 years ago.

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