Urban consolidation in the context of contemporary development trends

The history of urban development in Australia is somewhat distinctive. The timing of settlement, the nature and evolution of economic and administrative functions, and the role of the suburbs, together with the nature of the physical environment onto which white settlement was imposed, have all had a lasting effect on the current structure of urban development. The nature of development responds, albeit slowly, to a range of economic, social, and demographic forces imposed on the existing urban form.

Despite the massive land area and the relatively small population, the Australian settlement system has long been notable for two things: at the national scale, a high degree of metropolitan dominance, and at the metropolitan scale, the extent of urban dispersal. Both have been ongoing policy concerns, partly because the particular form of settlement has, rightly or wrongly, been seen variously as inefficient, inequitable, or environmentally undesirable; and partly because the outcomes do not conform to experience elsewhere. Solutions to change the outcomes of the particular population distribution have been sought in either dispersing the population beyond the metropolitan boundaries (decentralisation) to provide alternatives to the highly concentrated urban hierarchy; or consolidation, a means to combat 'urban sprawl', and the feared 'doughnut' effect of inner city depopulation and disinvestment characteristic of many American and British cities. While the two policies have very different solutions, they are both aimed at altering the perceived over-concentration of development in metropolitan areas, and most particularly on suburban development. However, neither of these policy responses have been particularly successful. While there is some evidence of a slowing down in the degree of metropolitan concentration, this has occurred in spite of, rather than because of, incentives for decentralisation. There is less sign of a slowdown in the outward extension of urban development despite a lowering of the rate of growth of the major cities.

The purpose of this paper is to examine the nature and means of urban consolidation in the context of some of the broad forces affecting the development of urban areas in Australia. Cities are dynamic outcomes of the interaction of a range of economic, demographic and political forces which continually change the nature, interrelationships, and location of land uses. The development path of Australian cities is compared with the goals and means of urban consolidation to assess both the diagnosis of, and cure prescribed for, a growing litany of urban ills.

The changing context: economic and social restructuring

An understanding of some of the changes in urban form and structure and the implications for public policy requires an understanding of the broad structural processes influencing the Australian political economy: for it is these which determine the rate and direction of urban and regional change.
The past 20 years have seen some dramatic changes in economic, social and demographic trends in Australia as elsewhere. These stem from both worldwide shifts, particularly in economic processes, and from measures taken within Australia to attempt to cope with such change. Economic activity is becoming increasingly internationalised. Both capital and production have become increasingly mobile and as a trade-dependent country, Australia has been directly and severely affected. Economic restructuring has been a response to the problems of world economic systems, particularly since the end of the long boom in the early 1970s. It is reflected in the growth of transnational corporations which have complex global networks and are readily able to shift production and investment in response to perceived changes in profitability, particularly labour costs. It is also reflected in revolutionary changes in technology which have enabled instantaneous communications over vast distances. The mobility of capital and linking of transnational operations are enhanced in ways which make the location of production and investment much freer than in the past. As a result, there is greater competition for investment and employment producing activities.

Government has responded to these processes by attempting to improve both international and domestic competitiveness. The Australian economy has been opened to global pressures through three major policy responses. The first was the progressive deregulation of the finance system (1983-85) which saw the Australian currency floated, accompanied by a relaxation of foreign investment including the introduction of foreign banks. The second has been the process of micro-economic reform and progressive deregulation of the labour market. The third has been the systematic reduction of tariff barriers, which has accelerated the rate of change in economic activity and employment by opening many of the traditionally sheltered manufacturing activities to much fiercer competition, particularly from south and east Asia. Increasingly, arguments suggest that the very nature of urban development itself, and particularly the social and physical infrastructure, are essential elements in that competitiveness.

The results have been dramatic changes in the pattern of work and structure of employment. There has been sharp growth in some sectors of the economy, particularly high-level producer services, community and public services (despite periodic public sector cutbacks), and in tourism and recreational services. At the same time there has been significant declines in other activity, particularly manufacturing.

The class and spatial impacts of this change have been very uneven. Traditional working-class employment associated with relatively secure, highly unionised, male, full-time work has been decimated. This employment has been replaced by a different pattern of work. On the one hand, there is the relatively well paid, knowledge based, professional, managerial or high-level technical jobs which are secure, full-time, highly specialised and highly concentrated (particularly Sydney and Melbourne). On the other hand, there are other jobs being created which are relatively poorly paid, part-time, and insecure. These structural shifts
have occurred very unevenly in spatial terms. Inner-city areas have shed substantial numbers of transformative and distributive jobs which on the whole have moved to outer areas, while increasing their share of high-level business services.  

Associated with these changes are long-term structural unemployment and a growing polarisation of wealth and income. More households have multiple income earners at the same time that there is an increase in households with no income earner. While there has been an increase in the number of women in the workforce, there is a greater probability that those women entering the workforce are living in a household where there is already an income earner. The bifurcation in labour market structure and in household income translates into marked disparities in the ability to purchase housing services, the amount of equity which can be raised, the borrowing power of the household, and thus the ability to express effective demand for housing. This is the dynamic which underlies the increasing difficulty in access to owner occupation noted by Yates.  

At the same time as these economic processes are altering work patterns, job security, and the distribution of income, significant change is occurring in the demographic structure of the population. These trends are affecting both population size and household composition, important determinants of housing demand. These trends include a slowing of population growth rates, particularly as lowered birth rates, later marriage and higher divorce rates reduce the rate of natural increase in the population. However, population growth in Australia is still relatively high compared to other developed countries, largely as a result of immigration. The level of immigration is a policy variable in that the categories and levels of intake can be altered to reflect prevailing conditions and attitudes. However, the demand for places also varies according to economic conditions, and targets are not always met. Immigration is strongly focused on Sydney and Melbourne, yet at the same time there is a substantial redistribution of population away from these centres through internal migration. A northward shift of the population from the south eastern states to Queensland has dominated population change at the state and national level, while at the metropolitan scale a continuing outward extension through fringe suburban development, with falling population levels in older established suburbs, is the predominant outcome. The overall impact, though, is an expanding population, but one whose distribution within Australia is changing substantially.  

There are also substantial shifts in household size and structure. Household size has declined from an average of 3.55 persons per household in 1961 to 2.80 in 1991. This is partly a reflection of smaller families; and partly attributable to the growing diversity of household type (single parent households grew 57 per cent between 1986 and 1991 and now make up 9 per cent of all families; over 10 per cent of all persons aged 15 years and over are now living alone). These demographic factors are contributing to substantial changes both in
housing need and in the ability to pay for housing. It is apparent that the
traditional avenues of housing provision are going to become increasingly under
pressure to serve the new realities. This description suggests that there is
growing inequality in the command over resources of rich and poor households,
and that the prospects of low-income households in the restructuring economy
are different to the low-income households of previous generations.
Maintaining access to appropriate and affordable housing is going to be an
increasing challenge in the near future. The changes are also having a major
impact on the location of other activities, as firms respond to increasing
competition by seeking to capitalise on competitive advantages. Part of that
search relates to the adoption of new and different forms of technology, which is
a major factor in changing spatial structure.

Technology and changing urban form
Urban form is the product of forces which structure the spatial juxtaposition and
interrelationships of land-using activities involving basic elements of production,
consumption and exchange. It has traditionally been governed by the need for
proximity of interdependent activities, balanced against the relative cost of
location. Proximity has traditionally been equated with centrality in a
monocentric city, and urban agglomeration has been the result of firms and
households attempting to minimise the costs of interaction. Thus urban form
has traditionally taken the shape of a high degree of centrality in activities which
require the greatest access, and an organisation of other land uses around the
point of highest accessibility.

However, the forces which determine urban structure are dynamic, and although
the built form responds slowly, there are very significant changes continually
occurring in the spatial relationships of land-using activities. Apart from the
changing nature of economic activity which is altering locational requirements
and preferences, the other force of most significance is the impact of
technological change, particularly on transport and communication; it is altering
the nature and costs of interaction, the constraints of proximity, and the
impedance of congestion. Technological change is not just an instrumental
device in urban change. The pace of technological change itself is driven by the
constant search for competitive advantage stemming from restructuring in an
advanced capitalist economy.

This is nothing new. Changes in transport technology have continually altered
the structure of the city. The very substantial shift embodied in the growth of
automobile and truck traffic has been apparent since the end of World War II,
although the scale of their impact has increased. Perhaps of more recent
significance, however, has been the impact of changing technologies,
particularly in communications. This, in association with changes in economic
organisation, is now having a considerable impact on the nature of city structure.

The greatest change is currently occurring in the capacity to process
information. There has been a rapid rise in the speed and capacity in telecommunications, as well as in information capture, retrieval and analysis. Most importantly there has been a convergence of the two. This has been both aided and promoted by the changes in the broad economic environment. At the broadest level, this is represented by the shift being experienced by many advanced capitalist economies from a base in industrial production, to an information economy. This is associated with significant changes in the organisation of economic processes, and particularly the shift to post-Fordist production methods, just-in-time delivery systems, economies of scope rather than scale, and the emergence of relatively small, highly interdependent activities connected not only by supply-demand relationships, but by a more subtle environment which is partly competitive, partly collaborative, and highly conducive to innovation. A long list of regions where these can be found including the USA, France, Scandinavia, Italy and the UK – are documented by Hall. The types of activities most involved are what Hall has termed 'high tech' and 'high touch', with the common elements the importance of advanced technologies employing computer-aided design and manufacturing to enable flexible production of short run, customised and specialised outputs. Those regions which can attract these highly mobile, flexible, innovative, and technically sophisticated activities are prospering; thus there is considerable competition to provide the conditions which will attract such enterprise.

The improvements in the production and distribution of goods and services, and drastic cost reductions in telecommunications, together with the integration of communications, information processing, and transport, has had the effect of reducing the constraints of agglomeration in space, and has increased the importance of time. Thus centrality is now less highly valued than it was for many activities; at the same time there is a greater degree of locational freedom. The result is a growing deconcentration of a number of diverse activities outward from the city centre toward the periphery, and in some cases beyond.

Deconcentration is nothing new. The first stages of the suburbanisation of residential activity can be traced to the late 19th century, and was given a boost from the rapid growth of affluence and automobile ownership in the 1950s and 1960s. However, the end of the long boom and the subsequent restructuring which is occurring, has increased the range of activities able or wanting to decentralise. Some of these elements include:

- Manufacturing and associated warehousing which require space-extensive sites associated with both single-floor operations and good access for large transports, good accessibility to road networks, and freedom from congestion. The decentralisation of these activities was aided by the suburbanisation of the skilled blue-collar workforce.
- Research and development activities which were not only free from the constraints of centrality, but which have increasingly come to seek high amenity locations, associated with relative proximity to highly-skilled professional and technical workforce, and to the growing number of universities found in the suburbs.
• Routine office functions such as the processing of insurance, finance and banking transactions, which have sought suburban nodes with easy access to both clientele and workforce, particularly a female workforce, but at lower rents than the central city offers.

• 'Edge cities'\(^1\) where a fuller range of functions are located, to the extent that it is almost a replication of the activities found in the traditional downtown. These are most significant in some US cities, partly as a result of the dramatic decline in central-city functions.

• Downtown cores, which, while they may have declined somewhat in relative importance, in many cities remain highly desirable for a number of activities, although these are increasingly of a specialised nature in high-level public and private administration, and producer services which still depend on the ease of face-to-face contact, prestige, and large office space availability.

The overall result is a continuing trend toward the development of a multi-nucleated urban form where, in particular, there is a complex pattern of work trips which diverge from the traditional radial pattern. These trends pose a challenge to many elements of traditional urban structure, not the least of which are infrastructure provision and pricing. These tendencies are likely to increase in future. Although still in its infancy, telecommuting or home working is certain to become a more significant element in home–work relationships. In addition to this, the prospect of the development of high-speed rail networks will also permit longer trips.\(^2\) The outcome is still uncertain, but is certainly moving a long way from the high density, monocentric city so typical of the 19th century city. The deconcentration, together with the growth of suburban nodes of activity, are so far the commonest response. There is an increasing prospect, however, that the development of non-metropolitan centres associated with fast transport routes will not only be feasible, but increasingly desirable in future. Decentralisation may yet have its day. In this context we need to question the adequacy and appropriateness of policy and planning responses which do not take these trends into account. The promotion of urban consolidation, at least in the manner it has proceeded so far, has been remarkably free of considerations of this nature.

**Urban development trends and the nature of urban consolidation**

Economic restructuring, technological change, and evolving urban form all have direct relevance to urban consolidation. Unless planners and their political masters concerned with the direction and implications of urban development actually appreciate the dynamics of the process, little effective action is likely. Too much of the debate has focused on the results of restructuring and the perceived symptoms of ills, and too little on the processes underpinning changes in urban form and function. There is presently a good deal of debate about the relative merits of low-density development, and a strong commitment at both state and federal levels to slow the process. However, many assumptions are
made as to the undesirability of current outcomes, without a full appreciation of
the forces behind the outcomes or the impacts, and an unwillingness or inability
to recognise the potential advantages of different forms of development.

Urban consolidation is a very vague term, encompassing a range of responses to
a large number of perceived urban ills. Roseth defined it as 'the increase of
population and/or dwellings within a defined urban area'. The Victorian
Government has talked of it generally as '... achieving a greater proportion of
future urban growth within established areas', while Collie cited Harris’s
definition as 'a process of planning and controlled development whereby the
density of dwellings and/or population is increased and greater choice is
provided in housing type, cost and location, providing access to services and
employment so as to achieve more efficient use of existing infrastructure and
economies in the provision of new infrastructure on the urban fringe'. Most
commentators have actually defined consolidation in terms of what it is trying to
achieve, rather than the means of achieving it.

In fact, it appears that 'consolidation', is seen as a process of developing more
compact residential areas to provide a panacea for a range of urban problems.
These can be summarised under four broad headings:

• Economic costs, particularly the goal to reduce expenditure on new
infrastructure at the urban periphery by achieving a more efficient use of
existing infrastructure.
• Social justice issues including a perceived lack of housing choice, and
problems of housing affordability and accessibility.
• Environmental sustainability stemming from environmental problems such as
rural land alienation, greenhouse gas emissions, consumption of non-
renewable energy sources, waste disposal, and water quality.
• Community development, whereby higher population densities would achieve
a more cosmopolitan lifestyle through encouraging more use of public as
opposed to private space, and the prospect of achieving more interaction
within the population.

Thus consolidation is attempting to address a very wide range of issues related
to settlement patterns. There is little doubt that some of these issues present
some very real concerns for present and future generations, although others are
much more contested. However, the question must be: how appropriate, in the
current climate, is consolidation as it is currently espoused, as a response to
these perceived ills; and how workable is such a response likely to be in the face
of the broad scale processes outlined earlier?

Others have expressed, very cogently, their concerns about whether any move to
a more compact city will solve some or all of the problems without unintended
or redistributive effects. These issues have been canvassed in depth by many
others, both in Australia and overseas. The key to my concerns about
consolidation as a strategy, however, goes beyond the concerns as expressed in
most of these areas. It is that consolidation, again as the term is currently used,
fails to confront the processes which are acting to alter urban structure. As it has been promoted and executed in Australia, it is essentially a simplistic response to alter residential densities in a seemingly non-strategic manner, in the face of some very powerful forces of change. The prospects for success are poor; the likelihood of unforeseen effects, great.

I will not address the many criticisms which have been made of the goal and means of consolidation, and whether it is likely to achieve the solutions to problems of infrastructure provision and financing, increasing overall community welfare, or making urban development more sustainable. That has been done by those cited above, most recently and comprehensively by Troy. The questioning of the overall impact of housing or population-related measures on the perceived problems consolidation is trying to address, as well as contesting the critique of low-density urban form, is justified, but meets the consolidation argument on too limited a basis.

Rather, I wish to concentrate on the fact that consolidation, as it has been promoted in most Australian cities, has relied largely on achieving residential densification, and has ignored other elements of urban functions. Attempting to alter residential densities, without addressing why it is that densities are falling, or how these are related to other outcomes, is a very partial response to a complex process, and thus unlikely to succeed. Most of the measures aimed at achieving a slowdown in outward urban growth have been directed at population targets and dwelling type and design, rather than at the interrelationship of land-using activities in total. Thus most of the reasons why residential densities have fallen, are being ignored. Urban-design issues have dominated the debate and little reference has been made to the forces underlying urban restructuring. There is a naive belief that a very limited set of land-use responses can solve a wide range of perceived urban problems.

Falling population densities have characterised urban development in cities, in the developed world at least, for a long period. This can be traced to a number of interdependent factors:

- Expanding consumption of space. Residential space usage has grown as living standards have increased. However, less well documented is the fact that the space consumed by other land-using activities has also grown dramatically as processes and methods of production, storage, marketing and distribution have changed. Increasing leisure time has created high levels of demand for recreational space.
- Falling household size as a result of larger numbers of single-person households, childless couples, later marriage, lower fertility, and the baby boom generation now becoming empty nesters. This is attributable to both lifestyle and life-cycle effects. In the aggregate, neighbourhoods undergo similar demographic transitions to households. Thus smaller households consume as much or more housing with fewer people.
- The reduction in residential densities in established areas, particularly the inner suburbs, can be the outcome of two very different processes. One is the
flight of population, activity, and investment from areas which are highly
degraded in social, economic, and environmental terms. This is the doughnut
effect of population flight. The second is the opposite - gentrification of
inner suburbs by small, affluent households replacing or displacing larger
groups, and investing heavily in the dwelling stock. Household numbers do
not change but household size falls and housing consumption per person
rises. Gentrification is related in part to the restructuring of central-city
activities and the growing emphasis on high-level service functions. It is the
latter which has been most significant in the fall in inner-city populations in
Australian cities.

- Growing levels of mobility, particularly through greater ownership and use of
  private transport modes, again a reflection of greater affluence of the
  population, which means greater locational freedom, at least for those whose
  automobile ownership is increasing.
- The expanding network of freeways and other road systems, which has
  markedly altered relative accessibility for both households and firms, has
  enabled locations to exist at greater distances but little time cost.
- Increasing levels and diversity of suburban employment opportunities have
  extended the range of residential development which are constrained by the
  length and time of journeys to work.
- The emergence of suburban activity nodes of retail and entertainment
  complexes which have diminished the need for increasing numbers to ever
  travel to the city centre.

Many of these trends are underpinned by the macro-scale processes discussed
earlier. Demographic transition, for example, is bringing about smaller and
differently configured households. Economic restructuring and technological
change is driving the movement of firms and businesses to seek less congested,
higher-amenity sites. The investment in transport facilities is aiding the shift
from public to private modes of transport.

The overall result is a fundamental shift in the structure of our cities. This is a
response to the transformation of the economy from one based largely on
production and manufacturing, to one based on consumption, service provision
and information processing. The locational needs of the various activities are
quite different. In addition, the impact of new technologies in production and
distribution where time is critical and distance less so, has also changed the
locational behaviour of many activities within the urban area. The result is that
an increasing range of interactions can occur without the need for personal
movement, thus decreasing the requirement for physical proximity. Where
personal movement is still required, mobility rather than proximity provides
accessibility. These changed relationships mean that there are now new
locational criteria, and new land-use patterns emerging. The low-density
residential suburb is only one manifestation, but there are many others which
involve other urban functions whose use of space is now quite different.
Population-serving activities such as retailing have already largely moved away from the central area in order to serve the dispersed population. At the same time, higher-level producer services have become more centralised; because while communications technology has enabled instantaneous interaction, face-to-face contact is still highly valued at the top levels. Thus the managerial functions have tended to centralise, while the routine functions have decentralised. In other areas, functions such as research and development, supporting the search for innovation and competitive advantage, have become of increasing significance in some cities, and are commonly associated with universities which have been located to provide access to an increasing suburban population, or technology precincts which have been located in relation to areas of high amenity. Highly accessible nodes such as freeway interchanges or international airports are also increasingly important for distributive activity.

An overall outcome of the changes impacting on cities is the emergence of complex polycentric urban forms in metropolitan regions. These have a new hierarchy of business centres, ”techno-spaces”, and industrial-commercial complexes. They reflect the changing nature of information-intensive services and knowledge-based production processes; the development of just-in-time delivery systems; a blurring of what constitutes industrial, commercial and retail functions; and the development of “smart infrastructure” networks based on new telecommunications and transport technologies and the necessity for global linkages. 28

To describe such development as urban sprawl is to misjudge the new realities of location and land-use arrangements.

Conclusions

The thrust of the argument in this paper has been that there are some fundamental modifications occurring to urban structure which involve complex changes in the relationship of land-using activities with each other. These activities are both interdependent, and responding to global and national trends. The ability of government, whether national or local, to resist these changes is very limited. Desired outcomes will only be achieved by understanding the nature of the processes and attempting to mould the outcomes in a way which takes into consideration the dynamics of the process.

Consolidation, as it is presently conceived, fails in two ways. The first is that it is attempting to deal with only one element of the land-use package – residential development. While lip service is paid to modifying other trends, little effective action is evident (for example, centres policy). The second is the way that consolidation measures are working against current trends, attempting to reverse the dispersal of development in an environment where a restructuring of the total land-use dynamic is well advanced in response to strong global factors. Yet it is doing it in a partial way, attempting to use the very limited range of policy measures available to land-use planners, effectively placing them in the position
of attempting to put the clock back, rather than looking forward to ways in which the new urban form may be moulded to achieve the desired outcomes. Consolidation policies have concentrated almost exclusively on residential activity, and on land-use measures, because it is those that the planner has some influence over.

We need to recognise the negative implications of current development trends, because clearly these do exist. But there also needs to be a recognition of the dynamic nature of changing spatial structure. A return to the compact structure of the 19th century industrial city is not an option. What is necessary is a recognition of the forces impinging upon urban development, and the problems this constitutes. An approach to guiding processes with particular outcomes in mind, rather than the determination of outcomes without reference to the processes and with only weak and partial policies, is a recipe for failure.

There are no easy answers. Financial and environmental problems will not go away. Business and community opposition will not evaporate. But at least there should be more justifiable grounds for policies which attempt to come to grips with, rather than ignore, the basic processes operating to alter urban structure. However, the goals can be addressed in quite different and more effective ways. There is a strong case to co-ordinate and direct development in a way which will build on the emerging polycentric structure of cities. The selective development of activity nodes, with accompanying higher density residential structures at points of higher accessibility will achieve many of the goals of consolidation, but in a more focused and realistic manner than is currently the case. However, it will also require a greater commitment on the part of government both to better co-ordinate activity across government sectors (land-use planning, transport, infrastructure etc.) and to invest in the appropriate infrastructure to facilitate the process.

19 P. Hall, 1995.
28 P. N. Troy, 1996.