

Urban Mega Transport Projects, Country Background: Australia

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Abstract

This paper outlines the background to the planning and funding of urban mega transport projects in Australia. The paper first discusses the impact of the continent-nation's peculiar settlement geography, and the nation's institutional structures and traditions. Then funding and delivery of transport infrastructure is discussed at federal, State and local levels. Finally, the Australian UMTF case studies are briefly described.

The argument unfolds that Australia's infrastructure development is at least in part governed by a historical desire to provide equivalent services across a geographically massive area, with extremely low population density. Roads and cars are deeply embedded in the Australian economy as well as in the Australian psyche, and the present federal government is opposed to policies which might change the structure of Australia's economy in any fundamental way. Australian transport policy is compartmentalised geographically, institutionally and functionally. The major cities, separated by huge distances, remain seriously time-segregated. The politics of transport is focused mostly at State level, but outcomes are strongly influenced, if not determined at federal level. Functionally, transport policy is segmented by the character of 'colonial bureaucracy': a siloed public service structure resistant to integrated thinking and planning. With the exception of Brisbane, there is no elected metropolitan authority to pull together political forces and institutional structures around integrated transport-land use planning for Australia's great cities.

Urban Mega Transport Projects, Country Background: Australia

Introduction

In this paper we set out the national background conditions in which urban mega transport projects (UMTPs) are formulated. The beginning of the paper necessarily considers Australia's unusually discontinuous urban geography. Then we turn to the political-institutional landscape of the country before examining in greater detail the institutional dimensions of funding, planning and delivery of transport infrastructure. We consider in turn the federal, State and local levels of government. Built into this system is a principle of geographical equity amongst (but not within) cities enforced by the central power. We depict a somewhat fragmented and disjointed institutional system which in some ways still resembles a collection of self-governing colonies under the tutelage of a now not so distant colonial power – once Whitehall, now Canberra.

Australia's geographical landscape

Australia's geography and settlement patterns have influenced the particular national meaning of transportation, the form taken by transport infrastructure, and the institutions and policies surrounding transport.

There are five large metropolitan, 'primate' port cities, around the coast; from the west: Perth (1.478 million), Adelaide (1.129 million people), Melbourne (3.635 million), Sydney (4.256 million), and Brisbane (1.818 million, but including the sprawling settlement of the Gold Coast about 75 kilometres south of Brisbane, 2.301 million). Canberra (0.325 million), the national capital, was deliberately sited inland between Sydney and Melbourne, some say to acquire a more serious public demeanour than could be expected of cities near the sybaritic life of 'the coast'. Hobart (0.203 million), the capital of the offshore island state of Tasmania, is little more than a large country town. Darwin (0.111 million) is a small port city on the North coast facing Indonesia, and there is a string of small ports northwards up the east coast of Australia from Brisbane. Mining towns such as Broken Hill, Kalgoorlie, and Mount Isa, and tourist towns such as Alice Springs are found dotted over the vast inland. The main urban centres (including large rural towns) comprise about 60 per cent of the population¹. In Australia, the term 'regions' is reserved almost exclusively for the non-metropolitan territory.

The mainland state capitals are surrounded, at a distance of up to 150 kilometres by smaller rural towns, and separated from each other by huge areas of sparsely populated agricultural land and, in the case of Perth, by the Nullarbor desert. So distances between cities are long. From Perth to Adelaide is 2725 kilometres (and to Sydney 4110 kilometres) making that city among the most geographically isolated in the world. From Adelaide to Melbourne is 728 kilometres, Melbourne to Sydney 963 kilometres, Melbourne to Canberra 647 kilometres, and Sydney to Brisbane 1010 kilometres.

The siting of what eventually became the State capitals is owed directly to the British colonization and settlement of Australia as a vast continent; settlement which initially took place from the sea. Canberra is the only major settlement whose site was chosen by Australians.

This human geography of Australia has three major implications for transport infrastructure and UMTPs. First, there is only limited development of dense polycentric urban regions as in Europe, which propels demand for new rapid rail links amongst cities. Passenger transport between cities is predominantly by air, and freight transport is by rail, ship and truck. A very extensive network of interstate railway lines was built from the mid 19th century onwards across the inhabited parts of the country, linking cities and country towns, but today the vast distances and long journey times prohibit their regular use for business and commerce between major cities and small rural towns. In the 1980s, construction of a 'very fast train' line was proposed between Sydney and Melbourne, but did not go beyond a small feasibility

¹ Population figures taken from Australian Bureau of Statistics estimates for 2005.
<http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/80A49E8C>

study, and the proposal was ultimately rejected as financially unattractive to private investors, and unable to compete with air travel. Another study for a new rail link between Melbourne and Brisbane was announced in the 2007 federal budget, mainly for freight transport. Much, but not all, of the road link between Sydney, Canberra and Melbourne has been upgraded to motorway standard, with by-passes around the bottlenecks of rural towns such as Albury and Yass. Other inter-metropolitan roads – the large sections distant from the main cities – remain for the most part simple two or four lane highways.

Space between population and production centres increases the cost of interaction. Australia suffers from the 'tyranny of distance' (Blainey, 1968). The effect of the spread-out nature of Australian settlement and the country's distance from its trading partners is to limit trade and reduce labour productivity. Ross Gittins, economics editor of the Sydney Morning Herald writes: 'Australia's remoteness from the rest of the world – not to mention the great distances between our own major cities – does much to explain both our low degree of trade and our relatively low level of productivity' (Gittins, 2006). In an important sense Australia still consists of separate economies centring on the major port cities.

The second implication of the settlement pattern is political. Because the main function of the road and rail systems at national level is to link agricultural areas and remote mining centres with the metropolitan ports, the federal transport portfolio has traditionally had a rural bias. With urban centres so distant from one another, federal expenditure on non-urban roads necessarily takes a large share of the roads budget. In the case of the conservative side of politics, the Minister responsible for transport is traditionally chosen from the rural-based National Party (formerly the Country Party, governing in coalition with the Liberal Party). Although the majority of Australia's population live in large cities, the rural vote remains important and can tip the balance at general elections². This gives the transport portfolio a rather conservative flavour with little interest in emerging issues for the longer term future such as climate change. Climate change, in so far as it is recognised as a rural problem, is linked to the issue of water supply and the periodic droughts which have always afflicted Australian farming. The link between transport and drought via carbon emissions and climate change has not yet entered the consciousness of rural communities. Urban concerns at federal level focus on rail, and importantly road, access to the ports. 'Infrastructure bottlenecks' are identified as a problem. So there is currently pressure, to which both major parties have responded, to increase expenditure on infrastructure. This pressure is resulting in proposals to build new motorway links in the cities justified by the need to serve freight transport.

The third implication of Australia's geography for mega-transport projects is that the largest of them are located within the metropolitan cities and initiated by the State governments responsible for planning and managing urban transport and building infrastructure. Projects currently under consideration include large new road tunnels under inner urban areas in Melbourne and Brisbane. Past projects already completed include the three UMTF case studies: Sydney Harbour Tunnel, Melbourne's City Link Motorways, and Perth's new urban rail system. The recently completed rail link between Alice Springs and Darwin is something of an exception, being a federal project completing the rail link from Darwin to the Southern and Eastern cities (Adelaide and Melbourne). It had been hoped that the link would assist the movement of goods between East Asia and the Australian economic centres, but it has been less than enthusiastically embraced by trading companies, which are finding shipping a cheaper alternative. In this respect the Port of Melbourne Corporation is proposing to dredge a deeper channel for shipping in Port Phillip Bay, at a cost of about AU\$750 million, to maintain the dominant position of Melbourne as the main port for Australia.

State Governments have the responsibility of maintaining and improving the metropolitan road and rail infrastructure, but this is mostly done in a piecemeal fashion. Again there are exceptions, as in the concerted effort by the government of Victoria to upgrade the regional railway network extending from Melbourne to the surrounding country towns (e.g. Geelong, Ballarat, Bendigo and the LaTrobe Valley). This could be regarded as a mega-project, though

² Australia's electoral boundaries are adjusted to accommodate the large landmass in such a way that it is not quite the case that every vote carries equal weight.

its impact on metropolitan Melbourne is likely to be minimal because little improvement in travel times is expected that would bring those towns closer to Melbourne.

As adumbrated above, Australia's geography and institutional history exhibit an interwoven context for mega-project development.

Australia's institutional landscape

Australia is a post-colonial society inheriting British democratic political institutions adapted for the colonies. The Australian 'State' is a British institutional invention creating self-governing successors to the separate colonies, which before that were governed from Whitehall. The six States, together with two mainland 'Territories' (The Northern Territory and the Australian Capital Territory) somewhat artificially divide up the whole surface of the continent³. With the exception of Queensland they have a bicameral Parliament elected by a variety of voting systems, none of which, incidentally, includes the British 'first past the post' system in which the candidate with the largest number of votes in a constituency takes the seat. In some States there are forms of proportional representation, in others preferential voting in which the order of preferences on ballot papers is counted if the candidate with the largest number of votes fails to command an overall majority.

In 1901 the States agreed among themselves, and with the colonial power, to form a federation with a national, federal government called the Commonwealth Government. This term 'Commonwealth' can be confusing to outsiders in the light of the existence of the 'British Commonwealth' of nations formerly within the British Empire. Elections for the Commonwealth Government are held every three years, with preferential voting for the House of Representatives (lower house) and proportional representation for the Senate (upper house). It is widely agreed by Australian political analysts that the federal government has steadily enlarged its powers relative to the States with each successive administration. One of the most important federal enlargements was the acquisition after referendum of the power to levy income tax. One of the latest enlargements is the revision of the industrial relations system in Australia under the Commonwealth power to regulate 'corporate affairs', which on challenge by the States was found by the High Court of Australia to be constitutional. The Territories are still in some minor respects governed by the federal government, but, like the States, they have their own elected parliaments empowered to make laws and deliver services for the benefit of their residents.

Elected local governments were instituted by the colonies and therefore pre-date the States, but then as now local governments were the creature of and subordinate to a higher power, then the British colonies, now the State Governments. As in the British constitution, the central power has the constitutional power to dismiss any locally elected Council, or all of them at once (as happened in Victoria in 1993).

While State Parliaments, when they were instituted, were nominally placed in control of the bureaucratic apparatus, in practice they exerted little actual control. This apparatus, which was already in place under colonial rule, was quite accustomed to conducting its own affairs and getting on with the primary task of developing the social, technical and physical infrastructure necessary for the functioning of cities, towns and markets. 'Colonial bureaucracy' actually formed a particular politico-institutional system. Colonial Bureaucracy:

'was based on trust in professional competence and ethics, and mobilised the expertise necessary for city building and nation building.... Laffin (1995, p.73) calls it the 'professional-bureaucratic model': line departments or 'statutory authorities' dominated by professionals, and the public service as a whole regulated by Public Service Boards.... Bureaucratic agencies were primarily accountable to Parliament and only loosely overseen by a minister who may have had formal oversight of

³ For instance, the river Murray forms a long part of the frontier between New South Wales and Victoria, meaning that the catchment is cut in half. In fact the whole Murray-Darling river catchment, crucial to Australia's agriculture, is divided among four States and the Australian Capital Territory, requiring complex co-ordination arrangements under the Murray-Darling Basin Commission and Ministerial Council.

several departments. Politics was not fundamentally about control or steering of the bureaucracy but about the struggle for supremacy and patronage among a variety of powerful interests and factions.' (Gleeson and Low, 2000: 71)

This model of governance placed public service agencies in vertical bureaucratic 'silos' with very little horizontal communication among them, let alone co-ordination of their activities and responsibilities. Perhaps this is simply characteristic of 'bureaucracy' itself as an ideal type. Whilst there have been serious attempts by State governments to change this system, particularly with the aim of giving increased power to Cabinet Governments to rule and steer the bureaucracy (see Gleeson and Low, 2000, chapters 4 and 5), the silos remain intransigently present in the culture of Australian governance⁴.

This silo effect is especially important in transport where the road planning agencies, and each separate form of public transport agency (trains, light rail or trams, buses) have their own silos with different degrees of power and different ways of viewing the world. Land use planning, likewise, exists in a silo of its own. There have been efforts to integrate the planning and management of public transport but there is no integrated structure comparable, for example, with the European *Verkehrsverbund*. In Perth the government of Western Australia has gone furthest of any State towards creating an integrated system by bringing public transport, roads and land use planning under a single Department of Planning and Transport. Yet even there the separate cultures of the agencies have been hard to change (for a fifty year history of the development of transport institutions in Victoria, see Astle, 2007).

We turn now to a more detailed discussion of the financial and institutional context of the planning and development of urban mega-transport projects in Australia.

The institutional context of transport infrastructure development in Australia

The key to understanding the context of urban mega-transport projects is the constitutional powers of the three tiers of government over spending and delivery of transport programs. In what follows we first consider the federal role, then the States and finally local (municipal) government.

The federal role in funding

The Commonwealth government has powers to raise funds for, own and regulate elements of the national transport system. First, the government has a direct role in transport under section 51 of the Commonwealth of Australia Constitution Act (the Constitution) which gives the federal Parliament power to make laws with regard to:

- the control of railways with respect to transport for the naval and military purposes of the Commonwealth (xxxii);
- the acquisition, with the consent of a State, of any railways of the State on terms arranged between the Commonwealth and the State (xxxiii);
- railway construction and extension in any State with the consent of that State (xxxiv);
- matters referred to the Parliament of the Commonwealth by the Parliaments of the States with respect to air navigation (xxxvii).

Section 98 gives the Parliament power to make laws with respect to trade and commerce, which extends to navigation and shipping and to railways, even if they are the property of a State.

Secondly, and providing the main source of revenue and capital under the Constitution, the Commonwealth Parliament has rights to pass laws on taxation (s.51, ii), bounties on the production or export of goods (s.51, iii), and borrowing money on the public credit of the Commonwealth (s.51, iv). All revenues or moneys raised or received under these powers are placed in one Consolidated Revenue Fund (s.81) with such funds to be used for the purposes of the Commonwealth firstly, and the surplus distributed to the states on a basis the Parliament deems fair (s.94). These arrangements severely limit the States' ability to raise

⁴ It's a standing joke among public servants that you can predict the fall of a government when it starts talking about 'drilling holes in the silos'.

their own revenues because income tax is levied by the Commonwealth. Funds from consolidated revenue represent about half of the total expenditures of the States.

A major source of revenue for the Commonwealth Government is the tax levied on fuel. Fuel was first taxed in 1901 when a customs duty was applied to the import of heating and lighting fuel. In 1929 excise was charged on domestically produced petrol. In this case, the revenue was raised for the specific purpose of developing Australia's road network, and the excise was hypothecated for road construction. In 1959, however, hypothecation was abolished. Since then, fuel taxes have gone into consolidated revenue and are treated as merely one of a number of revenue sources for the Commonwealth government. Even so there is an underlying assumption, encouraged by the road lobby, that taxes on motor vehicle use should be used to build roads. Australia now has a tissue of fiscal measures applying at federal and State levels strongly influencing the use of transport⁵. Necessarily these fiscal measures cannot be entirely separated from the drive to build urban mega-transport projects. Research is needed to describe this fiscal tissue in detail and analyse the incentive structure it creates.

Until 2000 (with the advent of the Goods and Services Tax, GST – equivalent to the European value added tax) redistribution of the Consolidated Revenue Fund proceeded under agreements reached at annual meetings of the Premier's Conference associated with the Council of Australian Governments (COAG). Distribution of funds was managed under the horizontal fiscal equalisation (HFE) principles. HFE is broadly about 'ensuring States have the financial capacity to provide comparable levels of services with comparable levels of taxes' (Australian Government Commonwealth Grants Commission 2006, p.2). Under the HFE principles NSW, Victoria and WA receive less than their per capita share of income (Commonwealth Treasury, 1998), this is in part due to the disadvantages experienced by the smallest states (in terms of their relatively smaller populations) and by the State of Queensland, whose population is more widely distributed than other States⁶.

Arrangements for the distribution of income following the advent of the GST are governed by the Intergovernmental Agreement on the Reform of Commonwealth-State Financial Relations (from <http://www.coag.gov.au/index.htm> 9 April 2007). This agreement continues the tradition of allocation under HFE principles. However, unlike previous grant systems most of the revenue is no longer tied to specific purpose grants (Astle, 2007). The Australian Government estimated it would distribute AU\$64.8 billion among the States in 2005-06, which represents about 50 per cent of estimated State total expenditures for the year. This distribution was to be made through:

- the distribution of the GST revenue (AU\$37.3 billion in 2005-06);
- health care grants (AU\$8.4 billion);
- other specific purpose payments (AU\$18.1 billion); and
- other payments (AU\$1 billion), mostly National Competition Policy Payments. (Australian Government Commonwealth Grants Commission 2006 p.2)

National competition policy payments are made under a series of agreements reached in 1995. These agreements extended the coverage of the Trade Practices Act to public monopolies and government business enterprises, especially in the areas of electricity, gas, water and road transport (available at http://www.aph.gov.au/library/intguide/econ/ncp_ebrief.htm). Under the agreement Australian Governments are obliged to ensure that competitive behaviour occurs in the provision of all services supplied by the public sector. The National Competition Council assesses the

⁵ There are many fiscal measures designed to impinge on transport and the use of vehicles. In the fuel domain, for instance, in 1979 liquid petroleum gas (LPG) for road vehicles was declared free of excise to encourage its use in Australia, where it is now available at most service stations. In 1980 ethanol as a motor fuel was declared duty free. In 1982 a rebate scheme was introduced to remove duty on diesel fuel for off-road (mostly agricultural) use, and extended in 2000 to include similar fuels and on-road uses.

⁶ While the State of Western Australia has a larger area than Queensland, its obligations to provide services are less geographically spread out because of a proportionally greater concentration of population.

progress by the States and Territories on the reforms, and advises the Commonwealth Treasurer on eligibility for the competition payments⁷. To achieve progress, States must take actions to improve competition, which, it is simply assumed, creates more efficient delivery of services. A key way in which competition is seen to be present is when vertically integrated monopolies are dismantled with service provision separated from policy development. This has been achieved in the main through corporatisation and privatisation arrangements in major services such as electricity, telecommunications, gas, and public transport⁸. Competition policy thus gives the federal government considerable financial leverage over how the States deliver transport services.

The federal role in infrastructure delivery

The Commonwealth Government does not directly build infrastructure, rather it provides funding for land transport under various programs in addition to the GST funds redistributed to the states. It should also be noted that the federal government has, since 1996, taken no part in any form of intervention in urban and regional (land use) development or planning. Prior to 1996 there have been several programs of urban intervention, the most recent being the Building Better Cities program (established in 1991, AU\$816 million distributed 1991-1996) which made modest allocations of funds to urban improvement projects including some transit-oriented development.

Prior to GST total annual federal funding for roads was listed as AU\$1675.1 million (99-00). In 2002-2003 that sum rose to AU\$1720.0 million despite the fact that grants identified for roads (AU\$408.8 million in 1999-2000) were subsumed in GST funding. In 2005 the Federal Government enacted new legislation to govern its involvement with land transport: the AusLink (National Land Transport) Act 2005. AusLink applies to the major road and rail links which are assumed to run in 'corridors' between Canberra, the national capital, and between each state capital as shown in Figure 1. In fact within urban transport systems, where some of the Commonwealth funding is applied, the concept of corridors breaks down since urban transport systems are functional networks. Funding is most needed for metropolitan road and rail network improvements managed by State governments, not road corridors thought up and funded by the federal government.

The first phase of AusLink (AusLink 1) provided funding of AU\$9.3 billion over five years for national projects on the AusLink national network. The funding was allocated as follows:

- AU\$7600 million for road, rail and intermodal⁹ construction,
- AU\$1500 million for road maintenance and
- AU\$120 million for national rail projects and the upgrading of bridges so that they can bear heavy vehicles.

All Australian road infrastructure is owned by the State and Territory Governments. The Federal Government does not own any main roads, and, until the creation of AusLink, did not provide funding for maintenance, which was left to the States. This of course has led to ongoing construction with reduced maintenance. Under AusLink 1 however AU\$300 million per year was provided to maintain roads within the AusLink network. Funding is apportioned according to a formula which combines each State jurisdiction's proportion of the national total of lane length, total vehicle distance travelled and total heavy vehicle distance travelled (thus States and Territories receive more money if their sections of the highway are multiple lane and if they used by trucks for road freight). Each jurisdiction can apply the maintenance funding where they see fit, but they are subject to agreed levels of service.

⁷ The NCC's 'mission statement' is, 'To improve the wellbeing of all Australians through growth, innovation and rising productivity, by promoting competition that is in the public interest' (<http://www.ncc.gov.au>).

⁸ The NCC covers air, ports, rail, road transport and taxis (<http://www.ncc.gov.au>). Note that competition policy covers many aspects of regulation of road transport, but the rail industry is not subject to specific national competition policy. However, 'NCP is, however, assisting in developing a more competitive and efficient rail sector through legislation review, competitive neutrality and structural reforms' (<http://www.ncc.gov.au/sector.asp?sectorID=23>).

⁹ According to the Auslink website the total to be spent on rail projects in the Auslink corridors will be AU\$543 million (<http://www.auslink.gov.au/funding/projects/rail.aspx>)

Figure not included

SYDNEY

MELBOURNE

Figure 1 Federally funded road building projects in the 'national road network' and its impact in Sydney and Melbourne (The black lines are road projects)

AusLink provides funding for innovation and research aimed at improving the effectiveness and efficiency of the program. Funding is also provided under the Strategic Regional Program directly to local government for projects aimed at promoting growth of regional industry or to strengthen local social and economic opportunities. Under this program funding is provided to accelerate projects, with part of the projects funded by the local government. Additionally AU\$60 million was provided for a 'black spot' program for the improvement of road conditions (such as signals and roundabouts) at locations where road crashes occur. AU\$1.23 billion over four years was also provided to local government for the renewal of local roads.

The actual funding allocated, and to what sector (roads, rail etc), is far from transparent in budget papers, and statements appear to vary to suit political circumstances. For instance, the federal Minister for Transport and Regional Services declared on March 7th 2007, 'We are spending AU\$15 billion on our national land transport plan AusLink from 2004-05 to 2008-09' (Vaile, 2007). Funding for AusLink was greatly increased in the 2007 federal budget (May 8th, 2007) which promised a massive AU\$22.3 billion to be spent on the second phase of AusLink (AusLink 2) between 2009 and 2014 (Smiles, 2007). This includes AU\$19.3 billion going to road and rail infrastructure, and AU\$3.2 billion earmarked for local roads grants. Foreshadowed is a major rail improvement program between Melbourne and Brisbane 'to improve access to major ports to ease freight bottlenecks' (ibid.).

From the Appendix to this paper some idea can be gained about the federal government's funding priorities. Funding for road projects is extremely dominant. The AusLink program represents the new federal approach to funding transport infrastructure. The aim of the approach is to integrate road and rail funding and simplify the funding programme. Although 'integration' is one of the principles behind AusLink, this does not indicate a new approach to transport. AusLink 1 substantially favoured roads, with AU\$9200 million allocated to roads and rail over 5 years. Only AU\$663 million was identified as being available for Auslink corridor rail projects.

The States' role in funding

The States receive about half their revenue from the federal government through the consolidated revenue fund. Thus federal policies regarding competition policy and road funding are very influential on State policy outcomes. The other half of their expended revenue comes from State taxes on land, payroll, financial transactions, motor vehicle registration and gambling (Commonwealth The Treasury 1999), and from revenue raised through the activities of government owned enterprises.

Apart from the Auslink corridors, State governments are responsible for the production of all new roads. State governments are also responsible for provision of public transport, and maintenance of State highways and lesser roads. Finance for the development of this transport infrastructure has been obtained through a number of mechanisms ranging from:

- allocation from the state budget
- direct borrowing and/or debt financing
- franchising agreements which include arrangements for infrastructure development
- public/private partnerships (BOO, BOOT projects)
-

In Victoria initially, revenue from motor vehicle use (motor registration, driving license fees etc., and from 1979 including a State petroleum levy in addition to federal excise duty) was paid directly to the agency responsible for maintenance and building of roads. This direct link between road users and funding was severed in 1982. But the expectation of user pays remained in effect and in May 1993 the Better Roads Victoria Trust Account was established

under the *Business Franchise (Petroleum Products) (Amendment) Act 1993*. This legislation generated revenue equivalent to a 3 per cent levy on fuel to be spent on road construction and maintenance, thus marking the return of hypothecated income for roads at State level (Astle 2007: 78 - 79). The petroleum levy was abolished in August 1997; from then on the State government has continued to make equivalent payments to the Trust Fund (VicRoads, 2005). Then from July 2003 an average increase of AU\$17 in the motor vehicle registration fee was channelled into the Trust Fund, and commencing in July 2005 receipts collected from traffic camera and on the spot speeding fines were also added (Department of Treasury & Finance, 2006b).

The States' role in infrastructure delivery

As noted above, the states have all traditionally managed the provision of transport services within separate bureaucratic 'silos' (mentioned above) as part of the Australian public administration system. This has led to the separation of functions relating to transport: aviation, roads, and public transport (buses, trains and light rail – trams). Additionally all the States have a department of government dedicated to infrastructure (which is broadly supposed to coordinate infrastructure development). One outcome of this silo mentality has been the development of groups of professionals embedded in particular places in the public service (Pillay, 2001).

Due to the availability of funding, the emphasis on road development over a long period, and the long term employment tenure of public servants, there exist, therefore, embedded and powerful groups of road engineers in the public service. These engineers actively engage in planning and developing projects, and tend to view transport solutions in terms of road building projects (for the history of the ideology and institutions of road building see Davison with Yelland, 2004).

The delivery of public transport is also in the hands of the State governments. But, again, States have not been successful in integrating the silos responsible for different modes of public transport. Moreover, since operational funding for the cities' public transport systems comes out of State budgets, there has been a continual strong concern about the 'public transport deficit' and a corresponding emphasis on cost saving. Expenditure on public transport is depicted as a cost, whereas expenditure on roads is depicted as 'investment' – two very different and compelling stories. The operational costs of private transport on roads are of course individualised and hidden from public view, though the recent rise in petrol price seems to be having a significant effect in encouraging public transport use and adding an incentive to live in inner urban areas where public transport is most available. During the 1980's and 1990's the silo system was reinforced by competition policy advocating micro-economic reforms, in particular the break up of vertically integrated monopolies. This was achieved through the separation of policy and service delivery (the separation of 'steering' from 'rowing'). All States have implemented this sort of reform in public transport service provision.

Interestingly in almost every state the roads corporation has survived relatively unscathed. State roads authorities have used private roads contractors for many years. Obviously because of the ongoing nature of maintenance there is a large support industry for roads in the private sector (gravel and concrete manufacturers, asphalt firms etc). This nexus of interests in road building has been supported by the use by urban land developers and private road engineers. Thus the impact of microeconomic reforms on roads authorities (responsible for planning and maintaining State road systems) may have been reduced, being seen more as the continuation of a trend. It also means that a significant private sector social nexus (within and inside government) for the continued development of roads exists which does not exist in the public transport sector.

The separation of land use planning from roads and public transport planning has also led to some particular features of urban planning. Urban developers have come to be responsible for infrastructure development on green field sites, including local roads, such infrastructure being handed over to the relevant public authority once completed. This means that in the main large urban developments occur without provision being made for rail (heavy or light)

servicing the development. This also embeds road based public transport as the only applicable solution¹⁰.

The situation in which developers find themselves has led to increasing demands that land use planning, and transport planning be better integrated. To some degree the separation of policy from service delivery has made such an integration increasingly feasible. Thus we see attempts by government to rationalise and downsize policy divisions (these being the only fragments left that they have direct influence over) by bringing together different functions around transport policy.

Differences amongst states

Despite a degree of commonality amongst Australian State government approaches to planning and in particular transport planning, there are differences. These differences can perhaps be described as variations in the degree to which political-economic theories (social democracy versus neo-liberalism) have been implemented.

Victoria has gone the furthest of all Australian states towards implementation of privatisation of public services. This has included both energy and transport. During the late 1990's train and tram public transport services were divided into competing franchises and licensed to private operators. The State, however, retained ownership and control of the track and rolling stock. Western Australia has moved furthest to integrate planning activities and attempts have been made to centralise the planning (but not so much the operations) of public transport which remains a public sector operation.

In all States the low level of investment in land transport other than roads has led to an impoverishment of expertise. This has had numerous effects. An example is the failure in Victoria to implement the most efficient network planning of rail and bus systems (as discussed for example in Nielsen, 2005), and the proposed investment in infrastructure to add a third rail track to the line between Melbourne and the suburb of Dandenong in Melbourne's outer east: investment costing over a billion dollars but arguably redundant if timetables were planned more efficiently (Mees, 2007)¹¹. Another example is the difficulties experienced in Victoria with analysis of franchise options because of lack of comparative data, and reasonable understanding of the possible efficiencies of the private suppliers.

Local Government

Local government looks after maintenance of local roads and footpaths, and also the production of bike lanes, traffic calming measures etc. This leads again to inconsistencies, for example the latest debacle with the Melbourne City Council wanting to put in place Copenhagen style bike lanes and being refused permission to do so by the State government (Lucas and Millar, 2007).

At the local government level, funding comes primarily from:

- taxes such as municipal rates on commercial and residential property,
- sales of goods and services,
- grants from higher levels of government, and
- developer contributions.

Of these, developer contributions have increased in significance in recent years (Neutze 1997).

¹⁰ Of course there are exceptions. In Roxborough Park, Melbourne, provision has been made for extension of the heavy rail line into the development with the developer even building a railway station, however the rail line is yet to be connected to the station, and no plans currently exist to do so.

¹¹ Note, however, that the public transport division of Victoria's Department of Infrastructure is moving towards more effective co-ordination of timetables between buses and trains (see comment by the Director of Public Transport, Jim Betts: <http://gamutcentre.blog.com/1573882/?page=2#15>)

Under the Intergovernmental Agreement the States have assumed responsibility for local government funding, to come from payments originating from the GST. In order to ensure funding certainty for local government, the Intergovernmental Agreement requires that States to continue to maintain the growth in general purpose assistance to local government on a real per capita basis and to meet existing Commonwealth conditions on the payment of assistance to local government.

Some grant monies are still passed through the State government directly to local government. This includes National Black Spot funds and Federal Assistance Grants (Commonwealth Grants Commission, 2002). Federal Assistance Grants were 'untied' in 1991, so that in theory local governments can spend the money on transport infrastructure. Yet the Commonwealth Government sought and received assurances from local government authorities (LGAs) that the money would be spent on roads. Deploying money from Federal Assistance Grants to non-roads projects has been described as 'brave', whether this is due to the potential political ramifications at the federal level is unclear. (Commonwealth Funding Programs)

Roads to Recovery grants (begun in 2000/01) are made directly to local government authorities, for specific roads projects. Each LGA has a total funding allocation, which it is empowered to access over the course of the four year programme to July 2005 (BTRE 2004). The programme has recently been extended until 2008/09 (BTRE 2004). Total grant allocation was AU\$1200 million (AU\$1.2bn) with Western Australia receiving a total of AU\$180.6 million (DOTARS 2002:25).

The OMEGA Australian Case Studies

Australia has selected three case studies of Mega Projects for the OMEGA project. They are the City Link motorway development in Melbourne, the Sydney Harbour Tunnel, and the Perth railway extension. The projects represent different forms of infrastructure (roads, tunnels and rail) and are geographically spread, enabling an examination of Australian Urban Mega Transport Projects in a variety of political and institutional settings. A fuller background to these projects is provided in separate documents (Muhammad and Low, 2006a and b, Muhammad, Low and Glover, 2006). Here they are summarised.

City Link¹²

City Link provides a 22 kilometre high speed tollway that links the previously disconnected freeways running north, west and south of the central business district. It was commenced in 1996 and completed in 2000. Tolls are collected through an electronic system with a transponder mounted on the vehicle. The project cost an estimated AU\$1.5billion (in 1993 prices).

Melbourne rests on a mostly circular bay almost 50 kilometres across at its widest point. The port and CBD are co-located both resting within a 5 kilometre area. The city fans outward in a radial pattern in all directions except directly into the bay. The need for City Link arose from the only partial completion of freeway networks originally envisaged in 1957 and supplemented in 1969, but never completed due to concerted community opposition to freeways through the inner Melbourne suburbs.

Comment: We should insert a map at this point

The aim of City Link was to provide a free flow between the seaport in Melbourne and a secondary port in Western Port bay to the south east of the city, the city and port to the airport and the interstate rail terminal (also located in the central business district). It was justified as reducing traffic congestion and decreasing travel time for commuters and freight transport, thereby improving economic efficiency.¹³ The project was calculated to provide AU\$228 million in benefits in 2000-2001 or a cost benefit ratio of 2.04 and also that it would create better air quality through reduced urban street congestion and the creation of bike paths and amenities along the roadway.

¹² The following is a summary of data available in Muhammad and Low 2006(b)

¹³ There is a belief in Australia that low freight costs are essential to economic prosperity

Sydney Harbour Tunnel¹⁴

The Sydney Harbour Tunnel provides a toll road link between the Warringah freeway north of Sydney harbour and the Cahill expressway south of Sydney harbour via a 2.3 kilometre divided highway through a purpose built tunnel. Construction commenced in 1988 and was completed in 1992. The project cost is an estimated AU\$738 million.

Sydney is also a strongly radial city. It differs from Melbourne due to the geography of the harbour. Sydney harbour is a long pointed wedge shape stretching from the coast in the east directly west for 30 kilometres. The central business district is on the south shore of Sydney Harbour approximately 5 kilometres from the coast, making a more circular radial pattern possible. An additional business district has grown up on the north shore of the harbour across from the CBD.

The main aim of the Harbour tunnel was to provide additional access between the northern and southern parts of central Sydney which was possible until then only via the Harbour Bridge and an extensive ferry system¹⁵. The aim of the tunnel was to reduce congestion on the Bridge, improving its capacity to carry buses and improving the reliability of the crossing for motor transport. The connection between the north and south of the city has been an issue since the end of the 19th Century, with tunnels proposed as early as 1885. However the imperative for the tunnel was reduced with the opening of the Harbour Bridge in 1932. The tunnel idea was reinitiated in 1954 – the reason cited being to reduce serious congestion. However it was rejected on the basis of cost. Various plans were made to build a second connection across the harbour in the period up to 1986, each being rejected on the basis of cost (and, later, environmental impact). The tunnel was eventually built after the New South Wales government was approached with a proposal to build it as a private investment in collaboration with the State government.

Perth Rail Extension (New MetroRail)¹⁶

The New MetroRail project in Perth is a major extension of the metropolitan rail system in Perth. It includes construction of 82 kilometres of new track, 20 new bridges, 15 new stations and a tunnel under the central business district, additionally there will be 93 new rail cars purchased and a maintenance facility built. The project has effectively doubled Perth's rail network. It was commenced in 2000 and was completed in 2007. The estimated cost of the project was AU\$1.61 billion.

Perth is located on the Swan River, about 10 kilometres inland from the coast. It is attached to its major port, Fremantle approximately 25 kilometres to the southwest, via continuous development¹⁷. The city is therefore almost completely radial, with the extension to the south being the longest. The city is split by the Swan River and its lake. The central business district is located on the north shore.

Comment: Insert map

Perth initially grew along an east/west axis based on a railway and road linkage with Fremantle on the coast. Its first railway connecting these two cities was opened in 1881. During the 1950's development away from this axis began with a sprawl based on very low density housing and road transport extending on a north/south axis. In 1979 rail services on the Fremantle line were terminated and replaced with buses. This line was then reopened in 1983, with electrification completed in 1992. In 1993 a northern rail line was constructed and extended in 2004.

These initial rail services were highly successful, with an increase in passengers from 7 million per annum in 1992 to 30 million per annum in 1997. Following the success of these projects the purpose of New MetroRail is to provide alternative transport services competing

¹⁴ The following is a summary of data available in Muhammad and Low 2006(a)

¹⁵ The ferry system is part of the public transport network and provides passage for persons only. The bridge provides both rail and road links, with 8 lanes provided for road transport and 2 tracks for trains.

¹⁶ The following is a summary of data available in Muhammad, Low and Glover 2006

¹⁷ These days Fremantle and Perth could be considered to be one city, but institutionally they have different city councils.

with those provided by the car. The network is therefore characterised by rapid trains (130km/hr) and stations located 2-3 kilometres apart.

Conclusion

Australia's infrastructure development is at least in part governed by a historical desire to provide equivalent services across a geographically massive area, with low population density to pay for it. Despite the redistribution of wealth in this way, there is still a large discrepancy between the standard of services (particularly health, public transport, energy and telecommunications) provided to rural people and those in urban areas. The functional domain which most successfully reflects this redistribution of wealth is roads.

Roads and cars are deeply embedded in the Australian economy as well as in the Australian psyche, leading to claims such as that made in *The Age* newspaper recently that if the federal government were to buy 'green cars' (low emission hybrids etc. which are not Australian made) car manufacturing in Australia would be finished, with thousands out of work. Similarly the construction company Boral has an entire division structured around the provision of bitumen. Concrete companies also depend significantly on road infrastructure construction. The present Commonwealth Government (as of 2007) is opposed to policies which might change the structure of Australia's economy in any fundamental way, including its adaptation to the exigencies of climate change.

Australian transport policy is compartmentalised geographically, institutionally and functionally. Cities are separated by huge distances, and however strong the efforts to overcome the tyranny of distance, they remain seriously time-segregated in land transport. While a healthy pressure politics surrounding the delivery of metropolitan transport services and land use planning is focused at State level, much power to determine outcomes lies at federal level. At federal level the politics is not focused on service delivery, or on urban development, but on the national economy and hand-outs at budget and election time. Much of the federal politics of transport takes place behind closed doors in COAG meetings planning infrastructure for the next twenty years, locking in a road-dominant strategy which appears to be completely at odds with any serious strategy to address climate change.

Finally transport policy is functionally segmented at the State level of service delivery by the character of colonial bureaucracy: a siloed public service highly resistant to integrated thinking and planning. With the exception of Brisbane there is no elected metropolitan authority to pull together political forces and institutional structures around integrated transport-land use planning for Australia's great cities. Thinking of Melbourne and Sydney on the one hand and Perth on the other, the State structures which aspire to that function appear to be effective in proportion to their independence from the State political level.

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Appendix

Building Australia's Roads and Railways for the Future

Joint Statement by the Minister for Transport and Regional Services (also Deputy Prime Minister) and the Minister for Local Government

(http://www.dotars.gov.au/departments/statements/2007_2008/media/001trs.aspx)

Road and rail funding in 2007-08

The Deputy Prime Minister said the Australian Government was continuing to fund critical land transport projects across Australia under the existing AusLink programme, with AU\$2.8 billion worth of funding in 2007-08.

The highlights of the 2007-08 land transport programme include:

- **New South Wales (AU\$781.1 million in 2007-08):** The Government will provide more funding for the Pacific and Hume highways in 2007-08, in addition to the AU\$960 million advance payment that the Government provided New South Wales in June 2006 to accelerate work on these highways.
- **Victoria (AU\$566.1 million in 2007-08):** The Government has allocated AU\$60.1 million in 2007-08 to continue work on the Geelong bypass, AU\$53.1 million for the Calder Highway and funding to complete the construction of the Pakenham bypass. The long-awaited bypass is scheduled to open at the end of 2007.
- **Queensland (AU\$766.2 million in 2007-08):** The Budget delivers the Government's promise to bring forward AU\$400 million to 2007-08 and 2008-09 to start work on the Goodna bypass between Dinmore and Gaiies, west of Brisbane. The Queensland Government is also able to press ahead with upgrading the Bruce Highway between Townsville and Cairns, because of the AU\$347 million advance payment to the state in June 2006.
- **South Australia (AU\$194.7 million in 2007-08):** South Australia will receive AU\$68 million in 2007-08 for the Northern Expressway and Port Wakefield Road upgrade, subject to the negotiation of joint funding arrangements between the Australian and South Australian governments.
- **Western Australia (AU\$308 million in 2007-08):** The Budget confirms that Western Australia will receive its full AU\$170 million funding allocation for the Bunbury Highway, because construction started before the end of 2006.
- **Tasmania (AU\$86.8 million in 2007-08):** The Australian Government will provide AU\$39 million in 2007-08 to complete the second stage of the duplication of the Bass Highway between Penguin and Ulverstone. The project will be completed in February 2008.
- **Northern Territory (AU\$65.7 million in 2007-08):** The construction of a new bridge across the Victoria River will begin in late 2007. The Government will spend AU\$18.2 million in 2007-08 on the construction of the new bridge and upgrading of other bridges, following its AU\$30 million advance payment towards these works in June 2006.
- **Australian Capital Territory (AU\$19.8 million in 2007-08):** The ACT will use additional funds received from the Australian Government in June 2006 to start duplicating Lanyon Drive. In a separate measure, the Government will spend AU\$58.8 million over four years (AU\$5.9 million in 2007-08) to redevelop Constitution Avenue and replace the Russell roundabout with a grade separated interchange.

Minister Lloyd said the Government's spending in 2007-08 would include AU\$307.5 million on the AusLink Roads to Recovery Programme and AU\$537.7 million paid to local councils in untied local road grants.

"We will provide local councils in South Australia with AU\$57.1 million in supplementary funding over the next four years to compensate them for their disadvantage under the local

road funding formula. Their supplementary funding in 2007-08 will be AU\$13.5 million," he said.

8 May 2007

Transport and Regional Services Budget

Funding for national network projects

"AusLink 2 will include AU\$16.8 billion over five years for road and rail projects on the AusLink National Network. These projects will make it quicker, safer and cheaper to travel between our major cities and will make it easier for our exporters to get their products to the docks.

"The Government will announce the details of the projects in due course. The projects will reflect the results of the 24 AusLink corridor studies that we are conducting with the states and territory governments. These studies will set out the strategic priorities for making our major transport links work more efficiently.

"Unfortunately, AusLink 2 will have to bear the cost of substantial carryovers to pay for the cost blowouts by the state and territory governments under the existing AusLink Programme.

"AusLink 2 will include new rules to stop the cost of projects running out of control due to poor planning and management by the states and territories.

"We will require all the state and territory governments to contribute to the cost of all new projects under AusLink 2, including projects on the former National Highway.

"Furthermore, the Australian Government's funding will be capped at a defined dollar figure for each project. The state or territory government will have to bear the rest of the cost, even if they mismanage the project and the cost blows out.

"These rules will ensure that Australian taxpayers get the best value for money for our massive investment in new projects under AusLink 2," Mr Vaile said.

AusLink Roads to Recovery Programme

The Australian Government will continue the AusLink Roads to Recovery programme until June 2014 and increase its funding by 14 per cent from June 2009. The programme was originally scheduled to end in 2008-09.

Mr Lloyd said, "The Roads to Recovery Programme is invaluable, because it provides local councils with extra funding to maintain and upgrade their road networks. Since we established the programme in 2001, councils have used it to build more than 25,000 projects on the roads that Australians use every day.

"The Government will increase its funding for the Roads to Recovery programme, from AU\$307.5 million per year at present to AU\$350 million per year from 2009-10. The funding increase will help offset the rising cost of road construction and enable councils to fix more local roads."

Expanding the AusLink Strategic Regional Programme

The Australian Government will spend an additional AU\$250 million on AusLink Strategic Regional projects in 2006-07. As a result of this extra spending, the Government's total investment in the current AusLink programme will now amount to AU\$15.8 billion from 2004 to June 2009.

Mr Lloyd said, "Our AusLink Strategic Regional funding helps local councils build transport infrastructure that will boost their regional and local economies and create jobs. We have invested AU\$220 million in 107 strategic regional projects so far, such as upgrading key sections of the Princes Highway in New South Wales.

"However, many important and valuable projects missed out on receiving support, because we received far more applications from local councils than we could fund.

"As a result of the extra funding in 2006-07, we will be able to make more funding offers in response to the applications we received from councils. The Government will announce the successful projects in the near future.

"In addition, the Government will invest an extra AU\$300 million in the AusLink Strategic Regional Programme under AusLink 2, which will enable councils to submit new applications for funding. We will allocate this extra funding in two AU\$150 million funding rounds, which will be held in 2009-10 and 2011-12."

Extending the AusLink Black Spot Programme

The Budget confirms that the Government will continue the AusLink Black Spot programme until June 2014, with a 33 per cent increase in funding from 2009-10. The programme was originally scheduled to end in June 2008.

Mr Lloyd said, "Currently, the Government is spending AU\$45 million a year under the Black Spot Programme to fund safety works such as roundabouts, crash barriers and streetlights where there have been serious accidents or where serious accidents are likely.

"We reintroduced the programme in 1996 after the previous Labor Government abolished it. By June 2008, it

Upgrade of the Victorian main line interstate rail track (Wodonga rail bypass)		20.0								20.0
Federation Fund		15.0								15.0
Additional funding for SA local roads					13.5					13.5
Untied Local Road Grants	156.0	110.9	100.7	82.2	29.5	28.5	12.6	17.2		537.7
TOTAL 2007-08	781.1	566.1	766.2	308.0	194.7	86.8	65.7	19.8	47.8	2,836.3

(1) 'Other' includes funding to the Australian Rail Track Corporation, payments for AusLink research and technology projects and to research organisations and funds yet to be allocated to the States and Territories for higher mass limit bridges.

(2) Black Spot funding does not include departmental costs of AU\$0.5 million
Figures may not add precisely to totals due to rounding.