

GOVERNMENT INTERVENTION IN INDIVIDUAL CHOICE AND THE EFFECT ON PUBLIC PASSENGER TRANSPORT IN SYDNEY

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INTRODUCTION

The high level of interest in issues of competition and ownership in public passenger transport, as evidenced by this conference series and the many reforms around the world which have been or are being implemented, is generated by the expectation that our quality of life, in particular in our cities, can be improved by addressing them.

At the last conference in Rotorua two years ago, there was a strand of concern that the debate was concentrating too much on achieving efficiency, or in other words on supply-side issues, and losing sight to some extent of the requirements of users. Because all urban residents are affected by the quality of their public transport whether they use it or not for particular journeys, the classification "user" must be interpreted as more than the bum on the seat. Users are not a uniform mass. The energetic smorgasbord of variety inherent in community travel needs tends to be poorly served by public transport - at least in countries with an anglo-saxon tradition - except for the regimented (white collar commuters, schoolchildren) and/or the captive.

Part of the reason, of course, is that public transport does not exist in a vacuum. The dominant means of transport in developed countries is, for most people and for most purposes, the private motor car. Much rhetoric appears on the theme of public transport needing to be competitive with the car. The system of "technology-in-use" (Freund & Martin, 1993) and the pricing and charging arrangements which underpin car use are a formidable obstacle to genuine competition. Another message emerging from the Rotorua conference was that progress in developing public transport will be limited until efforts to "right-price" car use start to be effective. Then, it might be possible to think of cars and public transport (and sometimes bicycles) as complementary rather than competitive.

In Australian cities, there is now general appreciation at government level of the need to integrate strategies to pursue a range of economic, environmental and social goals. Encouraging public transport to take a bigger share of the urban transport task appears in all the major metropolitan areas as a key strategy.

Transport policy-makers have some major issues to address which are not highly related to individual choice. One of the biggest is perhaps the long-term availability and price of energy. But a key policy issue for public transport is a more immediate one - how to get more

of the people to use it more often. This depends, ultimately, on individual travel decisions. These decisions are becoming increasingly more complex, what with the rapid growths of non-work travel, of the older segment of the population, of technology affecting all facets of behaviour (and which, through Intelligent Transport Systems, has the potential to boost further the attractiveness of the car relative to public transport), of non-traditional household structures, of new skills and working patterns, and so on.

The reasons why enhanced public transport is a preferred strategy element for governments are many and varied, and there is as yet little progress in developing an appropriate range of performance measures to assess progress. "Increasing the use of public transport" is not a useful objective for public policy, although it may suffice for those who are in the business of providing public transport. Some ways of increasing public transport use might be counter-productive from a public viewpoint. For instance, attracting people previously travelling at peak periods as passengers in cars can increase deficits - assuming that transit use is priced below marginal cost, as is common in Australia - without taking any cars off the road to achieve environmental benefits.

For public policy, enhanced public transport is a means to an end rather than an end in itself. This paper will examine some aspects of recent developments in Sydney which seek to make public transport a more attractive choice for users, and the extent to which other policy settings relating to competition and ownership influence that choice.

The dimensions of intervention open to governments in transport, other than the specification of the regulatory environment, are perhaps three-fold :

- through its influence on the provision and maintenance of, and the modal balance in, transport infrastructure
- through its influence on the pricing of all modes of transport and on the user charging mechanisms
- through its influence on land use change, which in the past has not been as integrated with transport change as current planning strategies assert that it will be in future

The settings of these policies have been static in many places for so long that they are considered to be immutable. But, as this paper will go on to demonstrate, preservation of these settings at their historical values is itself a form of intervention.

PUBLIC SUPPORT FOR PUBLIC TRANSPORT

One of the ways in which governments intervene in individual choice in public transport is in the way in which it chooses to support or not support various features of the system. A case study - transport provisions and concessions for older people in New South Wales (NSW) - was presented in Kilsby & Flynn (1995). Issues emerging from that review included :

- selective support by area, with great differences appearing between metropolitan and non-metropolitan areas, and within the Greater Sydney metropolitan area between the established eastern parts and the mainly post-war Western Suburbs

- selective support by owner/mode, with great differences appearing between government-operated trains and buses and privately-operated buses, coaches, taxis, aircraft etc.

Extending the picture to include all transport users, NSW spends in the order of a billion dollars per year from the budget sector on supporting transport (Kilsby 1996). This excludes costs of provision and maintenance of road and rail infrastructure. How do governments direct this expenditure ?

The organisational approach is the one traditionally followed by the public sector, which has to work within existing institutional arrangements and budgetary processes. Without this approach, of course, nothing would happen at all. But characteristics apparent from the outcomes include :

- the interests of transport providers feature heavily
- reform will tend to focus on efficiency improvements, i e doing the same things better, rather than doing different things
- because some government budget processes include Government Trading Enterprises (GTE's) and exclude many other types of service, the interests of people whose travel is provided by GTE's will tend to be better served.

A more cerebral approach can be found in the social policy sector. This holds that financial intervention should be aimed at overcoming barriers to acceptable levels of social performance in terms of a range of specific objectives. The nature of these objectives renders it quite difficult to devise targetted programs or schemes. A typical set (Kilsby 1996) would be :

- employment opportunities, opportunities for economic development and participation, income security
- health maintenance and treatment
- access to basic material needs, e g food
- access to education
- environmental quality
- individual and collective safety
- social, democratic, cultural and recreational functioning and participation
- self-sufficiency and freedom of choice

The approach advocated by Kilsby and Flynn (1995) was to aim to improve the targetting of expenditure rather than develop a rigorous absolute framework. They suggested that there are three de facto objectives behind current concessional expenditure, and a fourth one emerging as our understanding of cross-sectoral relationships develops. The four are :

- "threshold: - the social objective of looking after groups of people with particular disadvantages to bring them up to the threshold of basic mobility and/or accessibility to key services.
- "preference" - the quasi-social objective of giving certain groups in society preferential treatment.

- "marketing" - the commercial objective of giving low-cost access to surplus resources to obtain the marginal revenue, i.e. discount fares to attract passengers.
- "externality" or "cross-sectoral" - the holistic objective of achieving non-transport benefits from supporting access to transport for certain groups of people or types of transport.

The most problematic of these areas is the "preference" group. Many of these arrangements have evolved rather than been designed. For instance the infamous School Student Transport Scheme in NSW now consumes about \$A340 million per year, yet a recent parliamentary inquiry failed to identify what it was for. The first recommendation (Public Accounts Committee, 1992) was that someone should specify some objectives for the scheme. This has yet to happen. This is an extreme example, but in general preference-based schemes would be easier to defend if the preference element were reduced and replaced by one of the other three bases suggested above.

Urban Transit Deficits

Such attempts at reform sometimes have to contend with the defeatist philosophy that public transport losing money and requiring support is one of the basic facts of life. While Australia is well on the way to reducing the level of support through the processes to be described by others at this conference, there are still expectations that the more public transport you Government needs to organise the provision of, the more it will cost it. In Australia, public revenue is mostly collected by the Commonwealth Government which then re-allocates much of it back to the States to spend. The States with the bigger and denser cities get higher per capita allocations of Commonwealth funds because they are perceived to have higher per capita calls on their spending. While it is true that per capita deficits do increase with density and size (which are highly correlated), the reasons for this vary for different population levels. **Figure 1** shows the outcome of a recent investigation (Sinclair Knight Merz 1996) which examined the make-up of the per capita deficits. This was done by devising some artificial cities (A-D in **Figure 1**) which fitted into the size/density spectrum found in Australia, and applying typical physical and policy characteristics to them. The deficits were analysed in terms of :

- commuter systems - weekday peak period tidal movements of commuters to employment centres
- basic accessibility - the provision of a threshold level of accessibility for the whole population on an all-day, whole-week basis
- school transport
- optional users : non-work trips by choice users who find public transport more convenient by car (consuming otherwise unused resources at low marginal cost)

Two interesting points emerge from **Figure 1**. One is that transit deficits are by no means equivalent to commuter deficits - in smaller cities, most of the deficit arises from providing threshold levels of accessibility and mobility. Nevertheless the large commuter deficits (especially from rail systems) have dominated the debate so far. The second is that **Figure 1** suggests that the relation between size and deficit is not linear. While, with the occasional

anomaly such as Canberra, real Australian cities show a general relationship of deficits increasing with size, this relationship should not be extrapolated indefinitely. Indeed, one might suspect that the greater per capita support given to the largest cities acts as a disincentive to reduce the per capita deficits in the way **Figure 1** suggests is possible.

Figure 1 - Australian Urban Characteristics and Per Capita Transit Deficits 1991
Source : Sinclair Knight Merz 1996

City	Pop'n (000)	Density (pop/ha)	Transit Deficit \$/head/yr	Deficit Breakdown			
				basic accessibility	commuters	school transport	optional users
Darwin	68	9.38	147				
Hobart/Launceston	194	9.46	92				
City A	250	10.00	118	77%	6%	19%	-2%
City B	720	12.00	104	64%	22%	20%	-5%
Perth	1019	11.65	130				
City C	2250	15.00	163	33%	62%	12%	-7%
Melbourne + other Vic	3011	16.22	307				
Greater Sydney	3769	17.91	299				
City D	5000	20.00	147	22%	82%	11%	-15%

Hence discussion - as occurred in the previous conference in Rotorua - as to whether it is public transport's role to provide services for the welfare end of the market, or to offer a credible alternative to cars, or to move commuters at less than cost, is bound to be inconclusive. It depends on what sort of a city you are talking about.

Let us now consider a specific city, namely Sydney, capital of NSW.

RECENT REFORMS IN SYDNEY

The regulatory reforms to the bus and train sectors in NSW will be amply described by others at this conference. In brief :

- the new Passenger Transport Act of 1990 facilitated the provision of most bus (and ferry) services on a performance contract basis, granting local monopoly in exchange for delivery or betterment of minimum service levels, maximum fare scales and other criteria. The first round of contracts were for five year durations. These are now starting to expire and will presumably be re-negotiated throughout the state over the next 18 months as they run out. Although the regulations apply uniformly to all bus operators, in practice those provided by the government-owned State Transit Authority enjoy more channels of support than do their privately-owned counterparts.
- the State Rail Authority has been broken up, with its constituent operating units (CityRail, Countrylink) separated from the infrastructure owners (which has become the Rail Access Corporation) and maintainers (which has become the Railway Services Authority, and will compete with the private sector for its business).

Other evolutions are taking place in the areas identified earlier as the main avenues for government intervention in urban development, namely transport infrastructure, pricing and land use change.

In the infrastructure development sphere, there is much activity. This is due in no small part to the participation of the private sector in financing projects via BOOT (Build/Own/Operate/Transfer) or similar arrangements. Traditional funding from the budget also plays its role, for instance in building a "Y link" into the rail system near Parramatta, to allow for the first time in Sydney regional train services which do not run via Sydney CBD. The injection of private sector capital to provide public infrastructure has in Sydney progressed from the innovative (with the Sydney Harbour Tunnel and the Darling Harbour monorail being the forerunners in the mid 1980's) to the relatively commonplace :

- Two private motorway operators control a substantial portion of the city's freeway-standard roads, and a third project is under construction (the M2 motorway, discussed further in the next section). The Sydney Harbour Tunnel is in private hands. Proposals for two more private motorway projects are under review, with the usual divergence of views among both government and community as to the merits of such construction. If these proposals are approved, the various disconnected projects will start to form a network, albeit one with further gaps to address.
- The New Southern Railway, which links Sydney Airport and an ageing industrial area ripe for regeneration into the city's rail network, is under construction by a private company. When open for business in 2000, the company will operate the stations (but not the trains) for a 30-year period and there will be a \$6 surcharge for rail trips using the airport stations.
- The Pyrmont Light Rail Company will put trams back on the streets of Sydney in mid-1997, 36 years after the last of the earlier tram network was removed. The new light rail system does not have any regulatory controls on its price setting, unlike the train and bus systems.
- In non-transport areas, projects as diverse as the city's main water treatment plant at Prospect and the new stadium for the Olympics are under construction as private sector ventures.

As for pricing, progress has been less evident. A major inquiry by the NSW Independent Pricing and Regulatory Tribunal (IPART) into Public Transport Pricing has just been completed. The main conclusion was the fairly pragmatic observation that the general characteristics of rail users would probably allow urban rail fares to be increased a bit. Those looking for authoritative statements of pricing principles might be a bit disappointed, but as earlier observed to attempt to rationalise public transport pricing without also addressing the pricing and charging of private transport could not achieve much anyway. As for social concessions, IPART recognised that major anomalies existed, particularly in respect of pensioner "excursions". The most likely outcome will be extension of the best levels of eligibility to less favoured urban areas (while still perpetuating the city/country division), rather than a more fundamental questioning of what such concessions are intended to achieve. The rather predictable findings of IPART in respect to country rail services (cut staff, contract with coach operators for services, discontinue generous concessions for

pensioners in their current form) was followed by unsurprising political reaction (no, no, no) and lent an air of ritual to the proceedings.

Land use, the third dimension, is one where significant changes are sought but, as yet, the mechanisms for bringing them about are less than fully developed. There are some notable demonstrations in place, notably the regeneration of the inner-city peninsula of Ultimo and Pyrmont complemented by a light rail line due to open very shortly. The directions of land use change include greater centralisation of employment, but in a larger number of centres than hitherto ; increases in residential density both in greenfield development and in infill of established areas ; and greater integration on a local scale of activities with the transport networks (including pedestrian and bicycle linkages) that serve them.

Sydney promotes to the world that it follows a "whole-of-government" approach, thereby making a virtue out of necessity. There is no single government department driving the development of the city's transport systems, with three major players (and three ministers) in the Department of Transport, the Roads and Traffic Authority and the Department of Urban Affairs and Planning. Scientists who analysed the mechanics of the bumble-bee pronounced that it could not possibly fly : some observers are similarly bemused at Sydney's indisputably high standards of vitality, livability and even, in many areas, accessibility.

LIMITATION OF CHOICE

This paper suggested above three ways in which Government can intervene in urban transport development, namely through infrastructure provision and management, through pricing and through controls on land use change. Government may choose to take particular action - and thereby seek to influence individual behaviour - but even maintaining the status quo is a "particular action" with implications for the degree of choice which can be offered to transport users. We illustrate this with three examples taken from recent experience in Sydney.

Infrastructure for Buses

Usually there is a one-to-one correspondence between form and function in passenger transport systems. if you are a train, you will have a system which protects you from interaction with everything except passengers and other trains. If you are a bus, you are expected to be able to hold your own on the roads with cars, trucks, fire engines, bikes, pedestrians, utility companies digging up the road, and so on. One approach to enhancing the performance of bus systems is to turn them into little trains by upgrading the capacity to light rail levels. However we know that buses and light rail are not equivalent systems differentiated by capacity, they are functionally different. Therefore the functionality of bus systems can be enhanced by improving the bus-oriented infrastructure rather than going away from bus technology.

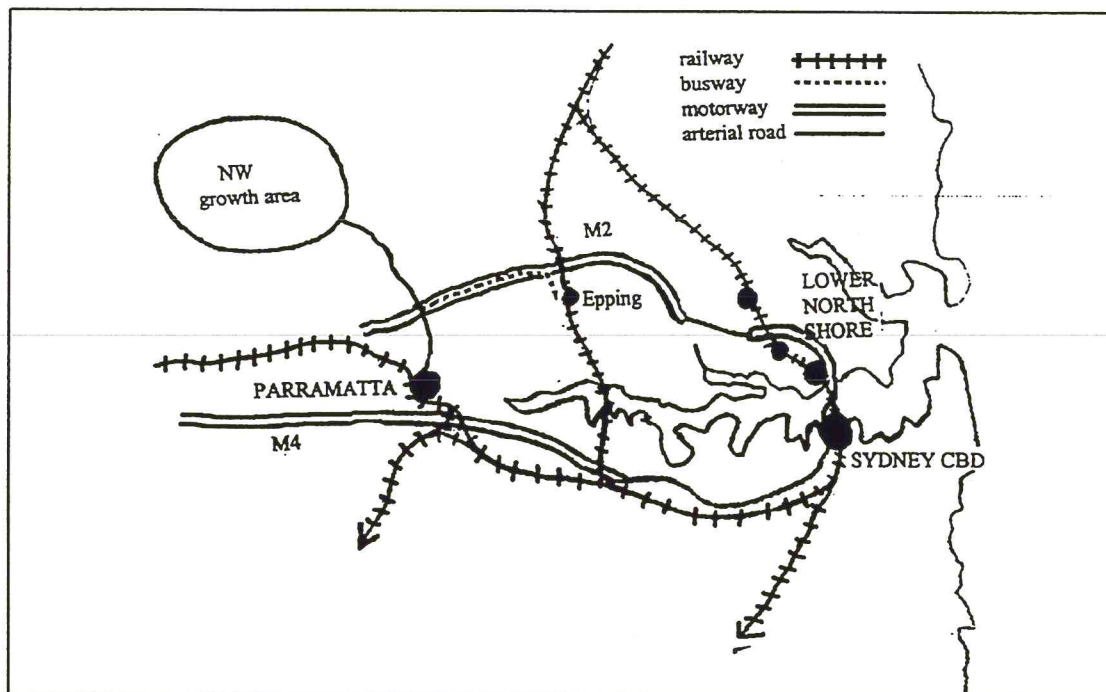
This is being recognised in a number of ways in Sydney. The Roads and Traffic Authority is devoting \$180 million over four years to improving the standard of infrastructure for road-

based public transport. This focuses on the management of the existing system via bus priority measures and the like, with a view to getting greater efficiency, safety and general social benefit from existing infrastructure.

For new infrastructure, the Department of Transport is developing the concept of "Transitways" - that is, higher quality public transport infrastructure for parts of the system not part of the metropolitan heavy rail network. The first two links in the emerging Transitway network are the new light rail line already referred to, and a new busway.

The busway is an integral part of the 28-km M2 Motorway. This is owned, is being built and will be operated (and tolled) by a private sector consortium. It will open in May 1997. **Figure 2** shows the location of this motorway, and the busway component of it. The motorway itself links the growing north-western suburbs of Sydney to the established inner centres, and the busway links the north-west to the main Northern Rail Line halfway to the city.

Figure 2 - M2 Motorway in Regional Context of Northern Sydney



While a motorway with a busway incorporated is much more welcome than one without (as was originally proposed, and rejected), there is clearly a high degree of interventionist thinking behind the busway design. It should be noted that while Sydney CBD itself offers some 193,000 jobs, there are a further 67,000 jobs in an 8-km corridor immediately north of the Harbour and that between them these jobs represent two thirds of all centre-type employment in the Sydney metropolitan region (Travers Morgan et al, 1991).

Thus, for residents of the north-west employed in inner-city centres, the main transit choice which has been devised for them consists of a three-legged trip : one leg to reach the busway, one to travel along the busway to the station, and finally one on the train. Moreover, from the interchange point at Epping, the Lower North Shore jobs are much further way by rail than they are by road because the rail line goes through Sydney CBD first before turning north to reach them.

Some bus operators from the northwest have already started running direct coach services to the Lower North Shore, and it can be expected that after the imminent opening of the motorway these services will become popular and will grow extensively. The embedded busway will undoubtedly be a success, but might it have been more successful had it run the whole length ? The northwest is more oriented towards the Lower North Shore than the city, and the motorway will boost this linkage greatly. Yet the choice for potential transit users has largely been designed away at the outset. From a public competition-and-ownership point of view, the new busway is quite convenient in that it is relatively self-contained and it will be possible to organise competitive bids to run services on it. (The author does not know how this will be or has been done). But this appears to be a case where providing user choice has taken second place to questionable prescriptive planning, and competitive operation is a secondary issue.

New Technology

The many obvious deficiencies of urban transport systems often motivate innovate technologists to devise new ways of moving people around. Some ideas are new ways of doing old things (e g maglev, monorails) and others are ways of doing new things (such as various Personal Rapid Transit - PRT - concepts). Yet the technical merits of such systems are largely irrelevant if they cannot fit in with the regulatory frameworks in force. Even the thoroughly conventional methods, buses and trains, were once innovative. The bus system started to flourish in Sydney after the First World War, as entrepreneurial ex-servicemen returned home and started to apply the advances in motor vehicle technology that had emerged in the forcing conditions of wartime. But, as the new bus services began to eat into the patronage and revenue of the Government's trains and trams, it stepped in and regulated away the competition by the 1930 Passenger Transport Act, which then governed the shape of things for 60 years. The high level of public support for light rail concepts at present is a mirror image of the high level of public protest in 1930 when people were forced to use the tram system rather than the buses they were coming to prefer.

Many of the concepts being generated depend on installation of unique infrastructure. The Darling Harbour monorail (a 3.5 km loop, opened in 1988) is a notable example in Sydney. A higher level of innovation surrounds systems which can be expanded into a network. An example of this is the Austrans concept being developed by Trans Research, a Sydney-based R&D company (Bishop & Taylor, 1995). This is an elevated light railway offering high service frequency with small capacity vehicles which can quickly be switched "off-line" for passenger boarding and alighting.

Assuming that the technology is proved by the testing now under way, how would this technology (or other non-standard systems, including perhaps in many cases light rail) ever get implemented ? The scope for introducing different technology into public transport would seem to be limited to three scenarios :

- a bus operator serving a particular area might adopt it as an upgrading of its trunk route(s), and integrate it with other services - but the introduction of permanent infrastructure would have severe impacts on the contestability of any contract arrangements. There are several significant public transport corridors in Sydney which are operated with buses, and given current policy it is likely that more will emerge in future. The regulatory implications of upgrading the underlying technology are mainly negative. the public transport
- the extent of the scheme greatly eclipses the size of the areas covered by individual performance contracts for public transport
- a new system could be incorporated in large-scale development or redevelopment where the land use and transport could be integrated at the outset and no existing operator rights are affected. This is the scenario which applies to Sydney's latest acquisition, the new light rail line connecting the developing Pyrmont peninsula to the city. It will open later in 1997.

Consideration of issues surrounding new technology highlights the extent to which we have predetermined the sort of services we get by protecting some forms of public transport (trains, buses and taxis are all regulated and supported in different ways) and implicitly excluding others even though the technology exists to fill in-between niches.

Bicycles

A third example we could consider is that of the potential role of the bicycle. The strategic planning documents for every Australian city all say very pious things about promotion of walking and cycling. In fact this is more often "walking-and-cycling" as a composite mode, a cyclist being considered mainly as a wheeled pedestrian rather than a motorless vehicle. And yet, with a few honourable exceptions such as Perth, cycling remains a niche mode favoured mainly by adolescent males.

Because cycle use is, by and large, unregulated, its users have little bargaining power. There is no arm of the bureaucracy whose future could be enhanced by promoting cycle use. (Perth, significantly, does have such an arm known as BikeWest). A small amount of regular funding is forthcoming (currently about 0.4% of the road budget in 1995/96 for NSW).

Is cycling of relevance to a conference considering competition and ownership in passenger transport ? Yes, because some of the arrangements from which passenger transport benefits have implicitly excluded the possibility of choosing cycling as a mode. While it could (and often is) argued that governments need to intervene to promote non-motorised transport, it is less often recognised that this is to counteract the effect of past implicit intervention to exclude it. The apportionment of road space and its controls between motor vehicle drivers and cyclists is the major issue. Here, I identify two lesser issues - preferential support for bus users over cyclists for school travel, and monopolisation of public land by rail track owners.

It has been suggested in Sydney that, if a serious attempt was made to establish a complete urban bicycle network the appropriate sum to spend would be in the order of \$40m per year (as against the \$7m which is currently spent, which in turn is twice what it has been in earlier years). At the same time the NSW state spends some \$150 million per year on moving children to and from school by non-Government-operated transport in the metropolitan area (\$145m by bus and \$25m by rail, from a statewide school transport budget of around \$340 million per year). Clarification of the objectives behind this high level of expenditure might suggest that the social benefits of supporting bicycle travel by children (including children who are currently driven to school in cars as well as those who are bussed, and including children not travelling between home and school, and indeed including those who are not children) could justify different allocation of those funds. At present, parental choice is limited by past action which has eroded road safety for cyclists and failed to provide alternative infrastructure, especially for trips to and from school.

In urban areas, the ideal infrastructure for cyclists would consist of a smooth track with as few ups and downs as possible, free from motor vehicles and crossings of busy roads used by motor vehicles, that goes directly to places you would want to go to and which can be accessed from local streets in the residential areas through which it passes. In many places the alignments used by the urban rail system - which fit this bill magnificently - offer the possibility of installing a cycleway along its verges, yet nowhere in Sydney is this yet done. We consider vertical separation of railways in terms of distinguishing between infrastructure and services, but we do not consider - as far as the author is aware - distinguishing between the infrastructure and the land on which it sits. A triple separation could allow the possibility of multiple use of land - it could also open the way for transit consortia to bid for the rights to convert underutilised urban branch lines to busways in the short term, or over-used busways to rail in the medium to long term.

Conclusions

The emphasis in the development of competition and ownership policy in transport has been very focussed on specific modes. Road-based and rail-based urban public transport are treated differently, which is to a great degree a function of the different ways in which the requisite infrastructure is provided and made available.

The bus and train spheres are not complete in themselves but are complementary, and the greater level of competition is between the composite public transport system and private transport. In most major cities of the developed world, and Sydney is no exception, policy is moving increasingly in favour of intervention to contain private car use.

The development of competition policy for public transport, and for the bus and train areas separately, must recognise the wider picture and allow scope for this intervention to occur.

This intervention already occurs, although often it results from omission rather than commission. This paper has shown that supply-dominated thinking is pre-determining the choices available to travellers to a considerable degree, and that broadening of the competitive framework to allow a higher variety of choice would be to the benefit of users.

It would also result in a greater differentiation of services. Transport providers would have the choice of either specialising or of generalising, for instance by merging bus and taxi interests and offering a more effective and/or efficient product as a result.

Institutional responsibilities would need to be consolidated rather than (or perhaps as well as) separated to achieve this, so that for instance busway planning could be done by those whose objectives were facilitation of successful bus services rather than privately-owned road infrastructure whose success would be measured in revenue terms, ie traffic levels.

The large sums of public money spent on social purposes in transport would benefit from this approach and could be better targetted to improve the pursuit of social policy objectives as a result.

Reforms to infrastructure and services framework would benefit public transport at the expense of private, but would increase differentiation of facilities. Such differentiation would be difficult to accommodate with mode-specific reforms.

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