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Kym Norley

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Urban rail infrastructure – the path from comprehensive transport plans to the recent experience

Kym Norley¹

¹UNSW Built Environment, Sydney NSW 2052, Australia, Red Centre Building, Kensington Campus.
Email for correspondence: knor8345@uni.sydney.edu.au

Abstract

Some 40 to 50 years ago the Australian State and Capital Territory governments produced comprehensive transport plans that began the transport planning processes for their capital cities. The subsequent path has been varied, particularly in regard to public transport. Sydney in particular has a long history of equivocation and deferral of major transport infrastructure construction, despite current and planned urban growth. Expansion of the railway network is now a major planning issue. Urban growth has outstripped that of the public transport system over an extended period and, whether or not policies of consolidation succeed, urban rail system capacity and extent is of concern. The past decade has been particularly problematic, and Sydney in particular has seen rapid swings in transport infrastructure policy and little new construction achieved. The primary purpose of this paper is to document the events of the past decade and how the plans have unfolded. It notes particularly the part played by the print media in raising the profile of transport planning in this process. The paper is based on path dependence theory and seeks to draw out the relationship between decisions taken over time. It will form the historical timeline for the author's research in examining the cost of equivocation in public transport investment.

1. Introduction

Some 40 to 50 years ago the Australian State and Capital Territory governments produced comprehensive transport plans for their capital cities. In most cases the implementation has not occurred entirely as their authors had expected (Norley, 1976, Muhammad and Low, 2006, Bray et. al. 2011). In several cases what occurred followed an unexpected path as communities, treasuries and politics have come to bear on the outcome. This is particularly true of public transport. Urban growth in the major cities has outstripped that of their public transport systems over an extended period. Urban public transport capacity, speed and extent is of concern whether or not policies to limit urban expansion succeed. Expansion of public transport network infrastructure is now a major planning issue for all of the major capitals. Sydney in particular has a long history of equivocation and deferral of major transport infrastructure construction, despite current and planned growth. The past decade has been particularly problematic, with rapid swings in transport infrastructure policy and little new construction achieved.

The purpose of this paper is to reflect on the events that followed the comprehensive transport plans and to chronicle the path from there to more recent events in Sydney in particular. It is based in part on Path Dependence Theory. It will form part of the historical timeline for the author's research in examining the cost of equivocation in public transport investment through a Sydney case study. The paper commences with a short discussion of the theory, and then contrasts the paths taken after the first generation plans in Adelaide, Perth and Melbourne. This offers a national perspective on the contrasting paths that have occurred. It then turns to its primary focus, the more complex path taken in Sydney. It notes

particularly the instability of the underlying politics that led to the planning paradigm and the part played by the print media in raising the profile of transport planning over the later part of this period. Much of this later discussion draws on media sources, recognising that care is needed where such sources may include opinion and 'spin' as well as fact.

2. Path Dependence

Path Dependence Theory is an approach that has become established in the disciplines of historical sociology and economic history over the past several decades (Mahoney 2000). Path dependence theory recognises that contingent events, or seemingly aberrant decisions, set in motion chains or vectors that are of a more deterministic nature. Simplistically it recognises that decisions and institutions are a function of their past as well as the present. Path Dependence is not simply tracing a path back to one set of initial conditions, nor is it just the result of political decisions or failure to implement. Goldstone (1998) explains this suggesting that the outcomes are governed by a series of events and choices made by a series of actors over time and responding to the conditions of the time.

Public transport system configuration is inevitably path dependent – any one system reflects its history more than a hard and fast typology. This is visible in the characteristics and application of the technology employed, as well as the work practices. Mees (2000a) draws attention to the argument that 'technological determinism' obscures the importance of other factors in affecting transport decisions; whereas in fact the politicians were making the decisions based on a range of determinants. Hensher (1996, p11) argued that such a course is appropriate as the future "must not be driven by the technological deterministic dreams of the past or future". Sort (2006, p.13) notes that:

"The transport system of all [these] cities is, therefore, the outcome of different policies applied at different historical moments in order to resolve the pressing problems that were posed at these moments"

Path Dependence theory sits very well in the study of urban development and that of infrastructure development in particular. Because urban structure changes slowly and has physical form, it can be analysed by this theory perhaps more readily than the economic history that has been so significant in development of the theory. GAMUT (2007) begins to draw together some of the path dependency issues associated with integrated public transport, suggesting that significant paradigm shifts are possible. Woodlief (1998) makes a similar point in distinguishing between political lock-in and structural lock-in, the latter relating to infrastructure decisions that cannot be undone once work has commenced. Woodlief also suggests that bureaucrats and other stakeholders have incentives to protect their programs and operate with their own rules and norms.

The path dependency that we are examining would appear to be long-term. At the extreme it encompasses the growth of automobile dependence in the United States influenced world, the Americanisation of Australian planning discussed by Freestone (2004) and the beginnings by 1970 of later recognition that highway construction was not necessarily the answer to accessibility and mobility. In Sydney's case there are certain events that have played a major role in determining the form of the transit system, notably that of the rail network. The major contingent event was the construction of the Harbour Bridge, City Railway and the electrification of the suburban lines. Arguably the later introduction of double-deck trains as a result of a non-conforming tender was an important contingent event that set in place another deterministic path (Macey, 2004). These events effectively created the basis of the CityRail system, together with its operating and work practices. However, the continuing inability (for whatever reason) of successive state governments to follow through on such investments has created the paradigm that we find today.

3. The First Generation Transport Plans

All of the Australian States and the Australian Capital Territory prepared comprehensive transport plans for their capital cities during the 1960s and early 70s. These were typically modelled on work that had been undertaken in the United States for the Chicago Area Transportation Study in 1955-61 (Creighton, 1970) and similar studies. In the US the 'comprehensive' studies resulted from post-war efforts by the US Bureau of Public Roads to encourage states to undertake them, and the Highway Act of 1962 made such studies mandatory for the major US metropolitan areas. These studies were the genesis of the network models that have underpinned transport planning since.

"Americans supplied the technical know-how. Using an early form of cost benefit analysis and downgrading the contribution of falling mass transit patronage, the foundational transport planning models of the late 1950s worked on the basis of "predict and provide" with new roads projected to accommodate increased traffic demand based on extrapolation of existing patterns. These evolved into more sophisticated multivariate models able to evaluate various network options and modal splits linked to alternative land use scenarios." (Freestone, 2004, p201)

These early plans were very much road-based, reflecting their highway sector promotion, the prevailing attitudes of post-war US and the technical difficulties of dealing with highway/transit mode split. Some of their assertions regarding urban densities to support public transport have been seriously questioned (Mees 2009).

In Australia the typical process was a technical study supported or conducted by one of the major US transportation consultants. The studies varied in the extent to which they were linked to the land use plans – which in contrast usually followed English practice – such as the 1948 County of Cumberland Plan for Sydney (Cumberland County Council NSW 1948). The first of the transport plans was a limited origin-destination survey undertaken by De Leuw Cather in Sydney in 1960 (Freestone 2004), but the first comprehensive plan was that for Canberra (Black 2008). The US plans on which they were modelled they were typically dominated by freeway networks. In the mainland state capitals planned investment in roads ranged from 60% of the total planned infrastructure value in Sydney to 87% in Perth (Bray, et.al. 2011, p526). Such plans drew significant criticism at the time (and still do) from both public and academic sources, largely because they were (a) socially disruptive (b) engineering-driven and (c) highway-oriented. The criticism, however, was also responding to and influencing major social change that recognised and highlighted the pluralism of society and the irrelevance of a one-dimensional and rigid technical view of the future. Traditional values were challenged. There was active opposition to decisions of government, and widespread protest against Australia's and the US involvement in the Vietnam War. Rights for women, for indigenous people and the environmental movement were pursued. The early plans were developed at a time when car-dependency was being recognised as an issue, and driven home by the first of the oil crises in 1973.

The concept of path dependence and the contrasts that it created are clearly evidenced by three examples (Adelaide, Melbourne and Perth). The paths that these cities followed differ one from the other, and Sydney's is different again. Each city started with a metropolitan transport study based on similar principles, but the long-term outcomes have been very different. Implementation of these plans has been influenced by community attitudes, the governments of the day and by fluctuations in the states' economies. In at least two of the three cases there were important contingent events or paradigms that reflect parameters that extend far beyond what the planners anticipated. The short discussion of the events following the studies is intended to provide a national perspective on the Sydney path.

Table 1 overleaf shows the extent to which the rail and road components of the original plans have been implemented in all four three cities.

Table 1: Implementation of First Generation Plans

	Adelaide	Perth	Melbourne	Sydney
Roads Planned (Km)¹	131	133	491	587
Roads Built (Km)¹	36	152	300	230
Rail Planned (Km)²	14 ³	31 ⁴	64	133
Rail Built (Km)²	9	109	13	24

- 1) Road Kilometres from Bray et.al. (2011)
- 2) Rail Kilometres approximated from original plans and current networks
- 3) Gross – excludes planned closures
- 4) Stephenson–Hepburn Plan (1955)

Adelaide's first generation transport plan, the Metropolitan Adelaide Transportation Study MATS (De Leuw, Cather 1968) proposed a network of urban freeways requiring major property acquisition. Its rail proposals provided for a north-south subway through the city centre connecting the main existing lines, but MATS otherwise planned on reduction of the rail network and the number of stations. The Glenelg tramway, the one survivor of the earlier closure of the city's tramway network, was to be surrendered for one of the freeways.

As elsewhere, community values were changing (Scrafton 1982), and were a major factor in what followed. Several of the freeways were quickly abandoned; however of the rail proposals only the extension of the line to the south and some minor line closures occurred. One development in the progressive undoing of MATS was the proposal to use the North East freeway route for public transport (Director-general of Transport 1977). The study team's evidence-based preferred option for the route was a light rail extension of the Glenelg tram line, mostly following the alignment of the MATS subway through the City before turning North East

A change in government resulted in adoption of the German O-Bahn guided bus-way system. The change in government may not be regarded as a contingent event, but the emergence of the O-Bahn technology was. It was adopted largely because its proponents reasoned that it did not require construction in the city as the light rail line did and it avoided the need for users to transfer from feeder buses. Ironically the light rail line through the city has now been built, and the lack of public transport priority in the city is a problem for the O-Bahn. In effect the Adelaide paradigm until very recently has been to do nothing other than incremental road improvements (including extensive road widening) and freeway construction outside of the old metropolitan area - a contingent non-event. Only 36 kilometres of the road construction had been completed by 2007 and only the Noarlunga extension of the railway.

Perth, in contrast, is the one case where the comprehensive plan triggered major upgrading of the rail network in conjunction with the freeway construction. The 133 kilometres of road proposed in the Perth Regional Transportation Study had been exceeded by 19 km in 2007, but the railway has grown by 109 kilometres. The Perth Regional Transportation Study (Perth Regional Transport Study Steering Committee 1971) was undertaken contemporaneously with its updated land use plan. Its earlier metropolitan plan on the English model, the Stephenson–Hepburn Plan (Stephenson and Hepburn 1955), had proposed two new suburban railway lines, urban containment, and an extensive road network contained within a 60 kilometre north-south limit (Muhammad and Low et.al 2006). However the US influence was already established. De Leuw Cather had advised on planning policy in 1963 (Freestone, 2004), and had already had considerable influence from 1961 in the planning for an Inner Ring Freeway that led to the Narrows interchange being built (Gregory 2009). The 1970 plans dropped the rail links in favour of building freeways and bus services. The Fremantle line was closed in 1979 to build a freeway, with buses replacing the railway.

Substantial community pressure led to the Fremantle railway being reopened in 1983 and, moreover, it led to a rethink of the policy in regard to the railway. In path dependent terms this was a contingent event. In 1984 the Government established an 'Inquiry into the Electrification of the Perth Suburban Railways' (Hoare 1989), and in September 1985 the Government announced its intention in principle to electrify the suburban passenger rail system. The Perth rail system renaissance is generally regarded as a success story. The network has since been greatly expanded (Walcock et.al. 2008). Ridership has grown five-fold (albeit from a small base) and it is seen as a model for low density urban rail. This is particularly the case for Adelaide which is regularly compared unfavourably with Perth (Muhammad, op.cit.), and which is now following the Perth model.

Melbourne now has the largest freeway network in Australia. It built 300 kilometres of the 491 km that the plan proposed. Melbourne undertook its comprehensive Melbourne Transportation Study in 1969 (Wlibur Smith et.al. 1969). As was typical, the plan proposed a freeway network (some 491 km) and railways including what became the Melbourne Underground Rail Loop (MURL), a line to East Doncaster and several in the south east (including past Monash University and Rowville).

Melbourne's freeway program has been a stop-start process depending on the government of the day, but much has been completed. The rail projects are less prolific than the roads. The Underground Rail Loop opened progressively from 1981. A number of relatively modest extensions and electrification projects have been undertaken. Provision for the East Doncaster line was made when the Eastern Freeway was built but the railway itself remains unbuilt. Victoria has, however, seen considerable investment not envisaged in the Study, including the Regional Fast Train project, and projects such as Doncaster and Rowville reappear from time to time as feasibility studies, most recently in 2011. Despite its extensive tramway system, its public transport mode share is little different than the smaller capitals, and well below that of Sydney (Bureau of Infrastructure Transport and Regional Economics, 2009). It is difficult to identify a contingent event that followed the MTC plan. Melbourne's path has been more deterministic, perhaps until the economic shakeup of the Kennett years. Alternatively those years may be seen as the implementation of the road component of the MTC and a new paradigm for public transport.

4. Transport Planning in Sydney

As with the other capital cities, Sydney prepared a comprehensive transport plan (Nielsen 1974) in the same vein as the US studies and those already undertaken in the other states. Sydney's was the last such plan. Like the other capitals, community attitudes, the governments of the day and fluctuations in the state economy have defined the path taken since. The State Treasury has also had a major role (Clennell 2010). The Sydney paradigm is, however, much more pronounced than the case in other cities, and it continues a long history of equivocation that dates back over one hundred years as discussed below. Sydney's transport planning equivocation reached a crescendo in the last decade to the point where the print media played a role as a surrogate transport planning agency. The remainder of this paper focuses on Sydney for these reasons.

A series of inquiries into City and Eastern Suburbs railways was undertaken by the State Government between 1857 and 1912 (Raxworthy 1989; Moss 2009). The final plan by JJC Bradfield (Chief Engineer Metropolitan Railway Construction), drew on these and overseas investigation (Bradfield 1916). This led to construction of the Harbour Bridge, the 'City Circle' railway (albeit incomplete) and the electrification of the network. The decision to open up the north shore of the harbour and construction of the Bridge and City railway may be regarded as the first of Sydney's transport-related contingent events, at least in respect to the last century. Prior to the Bridge, metropolitan development had largely been confined to south of the Harbour and to areas accessible by ferry and the North Shore railway. The Bridge

fundamentally changed this. On the other hand the protracted construction of the Eastern Suburbs Railway became a symbol of Sydney's inability to follow through on plans.

A number of plans were prepared for Sydney post the Second World War, including the Cumberland Plan (County of Cumberland 1948). Of particular interest in today's environment of growth pressures is the 1968 *Sydney Region Outline Plan* (State Planning Authority NSW 1968), which introduced a concept of Growth Corridors and identified land releases in the Hills District, West and South West, and it proposed that Parramatta become the major regional centre (Meyer, 2006, Westacott, 2004). The 1968 Plan was prolific in its rail proposals, and they were also contained in the Sydney Area Transportation Study of 1974 virtually unchanged. They included:

- New rail lines to the Northern Beaches, to the North West, and to Hoxton park in the South West, none of which have been built;
- Connections from East Hills to Glenfield (which has been built), Carlingford to Beecroft and Camellia to Parramatta (which have not);
- An Airport line (built by the private sector);
- A new City to Parramatta express line (not built); and
- An Eastern Suburbs line to Randwick (partially built, as described above).

Reflecting the objectives of the Outline Plan, the rail network extensions were focussed on Parramatta, rather than the Sydney CBD. These proposals collapsed after the Whitlam era and withdrawal of Commonwealth money for urban development. The subsequent plan *Sydney into its Third Century* (Department of Environment and Planning, 1988) recommended that no heavy rail corridor be retained and that either Light Rail or Bus could be accommodated by road widening.

The next significant transport plan was *Action for Transport 2010* (NSW Ministry of Transport 1998). Action for Transport was a state-wide Plan and its detail is limited; but it was even more ambitious in its infrastructure plans, which included:

- New rail lines to Bondi Beach, the Airport, Parramatta-Epping-Chatswood (Parramatta Rail Link – PRL), Hurstville to Chatswood and a Liverpool 'Y-Link'
- High Speed rail lines Hornsby to Warnervale and Newcastle, and from Sutherland to Wollongong
- A series of western suburbs bus transit-ways, and Light Rail to Lilyfield

This entire program, excluding Warnervale to Newcastle, was to be completed by 2010. However, by 2003 the Bondi Beach line had been abandoned (and the proponents compensated), the PRL cut back to Chatswood-Epping and one intermediate station deleted as a result of significant compromise to the alignment and to service (Rail Tram and Bus Union NSW Branch 2009). The Airport line had been completed by then, as had the Liverpool-Parramatta Transit-way and the Lilyfield light rail line, but there was little to suggest wholesale progress or funding of the other major rail projects.

Some impetus was evident in 2004 when the Government established the Transport Infrastructure Development Corporation (TIDC) under the Transport Administration Act 1988, with responsibility for delivery of major transport infrastructure projects (Transport Infrastructure Development Corporation 2009). TIDC has now delivered the Chatswood-Epping part of the PRL (which became The Epping Chatswood Rail Link – ECRL), a substantial number of projects under the 'Rail Clearways' umbrella designed to reduce conflicts in the network, and various interchanges and car parks.

The essential land use concepts of the current Metropolitan Plan *Strengthening the City of Cities* (NSW Department of Planning 2010) were published in 2005 as *City of Cities* (NSW

Department of Planning 2005). The transport centrepiece of the original City of Cities was the Metropolitan Rail Expansion Program (MREP), comprising three projects:

- The North West Rail Link from Epping/Beecroft to Rouse Hill;
- The South West Rail Link from Glenfield to Leppington; and
- The Harbour Rail Link (also referred to as the CBD Rail Link) between St Leonards, through the CBD to Central Station

The 2010 and 2005 plans differ in one material aspect in regard to the rail network – the 2010 plan no longer contained the Harbour Rail Link. Shortly after the 2005 version of City of Cities was released, the then NSW Premier Iemma accelerated the North West and South West Rail Link delivery timings in his Urban Transport Statement (NSW Premier 2006). It was this document that first began to raise the prospect of a Metro network as a possibility for Sydney.

In 2006 the draft State Environmental Planning Policy (Infrastructure) was placed on public exhibition (NSW Department of Planning 2006). In relation to railways, this SEPP provided for development of new railway lines and augmentation of existing railway infrastructure without consent as state significant projects. It created Part 3A of the Environmental Planning and Assessment Act 1979. A formal environmental assessment process was required. The North West and South West Rail Links were declared in April 2006 and the Transport Infrastructure Development Corporation (TIDC) was directed to undertake preparatory work for the MREP and to progress the environmental assessment process. The process as applied to these rail links was comprehensive in physical, engineering and environmental terms. It did not, however, publish any form of economic analysis or other rigorous means to justify or prioritise the projects. This aspect of the use of evidence and transport planning based on land use had by then virtually disappeared.

5. The Sydney *Metro* and the media campaign

The Sydney media began and maintained an extraordinary campaign between 2006 and 2010 to highlight Sydney's transport planning deficiencies. It was led by the Fairfax-owned *Sydney Morning Herald* but was picked up by the Australian Broadcasting Corporation and the Murdoch Press (notably the *Daily Telegraph*) from time to time. With the release Urban Transport Statement, the press began to draw attention to the range of failed Sydney transport projects, citing the then Leader of the Opposition as saying that "12 of the 16 projects pledged in the Government's last big transport plan, *Action for Transport 2010* in 1998, had not been delivered" (Baker 2006). In its coverage of delays and changes in project priorities the media campaign raised the profile of the public transport issue in Sydney to the point where it became a consistent problem for the Government. It was to become a mantra for the Opposition transport spokesperson until the 2011 election. Premier Iemma is quoted as responding that "the plan had been a long time in the making. Some projects in the 1998 report were 'aspirational', but these [2005 Plan projects] were concrete plans" (Baker, op.cit.).

One of the early articles in this campaign was triggered by the Government's equivocation on the CBD/Harbour Rail link. Only two years previously this part of the Metropolitan Rail Expansion Program had formed a centrepiece of the 2005 Metropolitan Plan and the Global Economic Arc (NSW Department of Planning 2005), and it had been reinforced in the Urban Transport Statement of 2006. The article, headlined 'The ghost at the end of the tunnel' (SMH 2007a), expressed concern at the likely indefinite deferral of what had been regarded as an essential piece of central infrastructure to deal with capacity issues in rail network. At the same time the Government suggested a new 'Anzac Line' Metro from West Ryde to Malabar, which in part paralleled the ECRL connection between the NWRL and the City of Sydney (Besser 2007). It bore little relationship to anything announced previously. By the

end of the 2007 year the Premier was reported as talking up a Metro system for Sydney (SMH 2007b), albeit cautiously suggesting that it could take decades.

By this time the emerging instability of the position of State Premier was apparent. The media had also begun to note the emergence of what was later termed a 'Guerrilla Group' of officials intent on building a Metro rail system as the basis on which to attack the entrenched industrial position of RailCorp (West 2009a). The confluence of these two paths suggests a situation where a contingent event and new direction might emerge. Despite the initial caution, it only took until March 2008 before the Premier announced the North West Metro as a definite project. The announcement was reported as a matter of fact by the Herald (Ralston 2008a) and also by the Daily Telegraph, albeit by the latter under the headline *2017: A north-west rail odyssey* (Masters, 2008). The Herald was later to flag an emerging intergovernmental matter, reporting that "the Prime Minister, Kevin Rudd, and the Treasurer, Wayne Swan, told a meeting in February involving the former Premier, Morris Iemma, and senior state bureaucrats that they were not interested in the rail project because Labor had no marginal seats in the area it would service" (Clennell and Besser, 2008). By May that year the Telegraph was reporting that 'damning internal Government documents ... reveal the project is rushed, not finally costed and bogged in confusion.' (Hildebrand, 2008).

The matter of fact tone of the Herald's transport reporting also began to change to cynicism after the NSW premiership changed again in September 2008. It reported that "NSW Premier Nathan Rees has unveiled his new vision for Sydney's transport woes, saying he wants the Commonwealth to fund a \$4 billion CBD metro line which finishes five kilometres out of the city centre" (Ralston 2008b) and that the "NSW coordinator-general... said the project had been developed over the "last few weeks", however neither he nor the Premier were able to give a figure on how much it would cost. A media release including the project's cost was sent out over an hour after the press conference had ended" (2008).

The North West Metro project was still officially State Government Policy as at 5 October 2008, when the Premier's spokesman was reported as stating that it was part of the Budget process (Andrew Clennell and Linton Besser 2008). However, when the Mini Budget was brought down on 11 November 2008 (Roozendaal 2008) the North West Metro had been scrapped in favour of the more limited CBD Metro. At the same time the South West Rail Link was reduced to a grade separation at Glenfield (the junction between the East Hills Line and the Main South Line) and a car park at Glenfield. The South West Rail Link, as such, was deferred pending population growth in the area. The proposal to duplicate the Richmond Line into the North West Growth Centre was also reduced in scope, and several remaining projects of the 'Clearways' program were abandoned. In effect, the 2008 Mini Budget deleted almost all of the planned rail investment that was to have served the City of Cities Growth Centres.

The CBD Metro became a priority for the New South Wales government. The project was declared under the Part 3A of the Environmental Planning and Assessment Act on 5 February 2009. The project application was lodged at the same time. The registration of interest process for the Integrated Metro Operations (IMO) and potentially future extensions and for construction of the Permanent Route Infrastructure (PRI) was commenced in April (Sydney Metro Authority 2009a). Land Acquisition had been started by June (West 2009), with a \$600 million State Budget allocation. The media dutifully covered each new announcement as it occurred, along with commentaries about the process (Bibby 2009).

By September, with the release of the Metro Environmental Assessment (Sinclair Knight Merz et.al. 2009), the CBD Metro had been rebranded as the 'Sydney Metro Network Stage 1'. In August a Preliminary Environmental Assessment had been released for the West Metro (Sydney Metro Authority 2009b), which by that time had become the second stage of the Metro network. The West Metro was to run from the southern end of the CBD Metro to Parramatta and Westmead. Sydney Metro's publicity from mid-2009 was showing a later

North West Metro to Epping with a vague suggestion that it might be extended further. The extension beyond Epping no longer appeared in Sydney Metro publications.

It was a month before then that the Herald, under the editorial direction of Peter Fray and specialist transport report Andrew West, made a major move: it began a campaign to place transport planning high on the public agenda by conducting its own inquiry. In August 2009 it published a series of articles in an extended feature about Sydney's transport (Fray, West 2009 and others). These were introduced in hard-hitting terms: "The archives of assorted NSW transport agencies are awash with discarded plans to improve Sydney's sclerotic train and bus networks. Schemes remain just dreams and Sydneysiders have had to endure nearly a century of arthritic transport planning much like the train system at its worst: promises and cancellations, tentative starts, shuddering stops and diversions to nowhere" (West 2009a). That article contained a litany of failed projects that it attributed to years of politics over sound planning and to specific governments. Other articles in the series examined the problem of congestion, the organisation of transport agencies, other options and more.

The Herald Inquiry was to be chaired by Ron Christie, former head of the Roads and Traffic Authority, Coordinator-General of Rail, and Director-General of Public Works and Services. It was supported by a small team of transport specialists. As Coordinator-General, Christie had previously produced a Long-Term Strategic Plan for Rail (2001), but this had had little public exposure. Likewise Garry Glazebrook, the academic on the team, had produced a Thirty Year Public Transport Plan for Sydney (Glazebrook 2009). Both these plans and other inputs were reflected in the resultant Herald report. The report was a comprehensive document of some 400 pages that was highly evidence-based, and covered a full range of relevant issues: the network, fares, continuous improvement, funding and finance, and implementation. A Preliminary Report was released in February 2010 (Christie 2010) and the Final Report was released on May 30, 2010.

6. The Recent History - the 2010 Transport Plan

The year 2010 had commenced with the abandonment of the Metro. The then Premier Menially halted the compulsory property acquisitions at Rozelle during January 2010, which in turn prompted media speculation that the CBD Metro would be cancelled. The Premier announced on February 14 that the Metro program indeed would be cancelled. The ABC reported the anger of industry and property owners and the local inner west media reported the cancellation with considerable glee. The reality of the metro saga is that the credibility of the Government was seriously damaged, along with the relationship of the State and the private sector. It has also effectively taken the possibility of Metro construction off the agenda for at least several election cycles, if not longer. As noted earlier it had been speculated that the Metro was as much a means to manage RailCorp and the Unions as it was a look to new rail technology. If that was the case it is likely that reform in the urban rail sector in Sydney will be a path warily trod. The path had turned full circle.

The media continued its focus on transport into 2010, maintaining a level of cynicism as the Metro was cancelled and the 2010 Plan (NSW Transport and Infrastructure 2010) released. "The showpiece transport plan the Rees Government will take to the next election will recycle several previously announced projects, the Minister for Transport has revealed" (West 2010). The Herald also took some credit for the collapse of the Metro Project: "In his interim report in February, Mr Christie urged the government to scrap the \$5.3 billion CBD Metro... The Premier, Kristina Keneally, axed the Metro but said the government would retain the Metro corridors for a future metro system" (West 2010). Today, the Herald appears to have moved on from its strong interest in transport. Andrew West is no longer has the transport portfolio and Peter Fray was promoted late in 2010. As at June 2011 the NSW Transport Web page (SMH 2011) had not been updated since the release of its Inquiry.

The 2010 Metropolitan Transport Plan (NSW Transport and Infrastructure, 2010) essentially continued the status quo, with the bulk of the expenditure going to the existing network. Most new infrastructure was deferred under this Plan for five years (Norley 2010). There was a consistent expenditure of \$2.2 billion per annum planned for the state's roads, and \$1.7 billion per annum average for new trains and renewals/upgrades for CityRail and the bus fleet. This is a very significant amount and reflects part of the problem, in that maintenance and renewal of the existing transit network have become a large demand on the budget, nearly equalling that for roads. Of the total \$50.2 billion committed for the 10 years to 2020, only \$7.8 billion (16%) was for new rail projects and much of this was to enhance the existing Western corridor (the Western Express/ City Relief line). The North West Rail Link, first proposed as a line from Parramatta in 1968 and again in 1998 to Castle Hill by 2010 reappeared 'brought forward' (Premier of NSW, 2010) to be completed in 2024.

This lack of real network expansion continued to be of concern to many observers of urban development. The 2010 Transport Plan was criticised both for its lack of future commitment and for its lack of analysis (NSW Business Chamber 2010, Property Council of Australia 2010). It contains a small number of diagrams representing key issues such as accessibility to jobs (page 20) but no analysis of the impact of the projects listed as committed, either in economic terms or the accessibility benefits. In essence the Plan comprised a series of unassessed projects with no clear explanation of how they have been prioritised or how they relate to urbanisation strategies, land release or travel patterns. In this regard – its serious lack of evidence – it contrasted greatly with the Herald Inquiry report. Had it contained the evidence there may have been greater acceptance of the Western Express, for example, since simple mapping of the demand on this and other corridors vividly shows the load that the Main West corridor carries. On the other hand similar evidence would also have highlighted the lack of demand for the South West Rail Link and the contrast with development around the deferred North West (Norley 2010). It is not that the evidence is not available - NSW has an effective Bureau of Transport Statistics that maintains and analyses data, surveys and runs the Sydney Strategic Travel Model for planning purposes (Bureau of Transport Statistics 2011).

Subsequent to the Transport Plan the State published its revised submission to Infrastructure Australia (NSW Transport and Infrastructure, 2010). This document sought to redress the deficiencies in the original submission to Infrastructure Australia (New South Wales Government 2008), and by doing so represented a change in the nature of planning documents produced by the State. It contains much more substance than had been the case in recent previous years. Some of its language is couched in the same terms as the previous plans, particularly in the Executive Summary and Overview; however the Infrastructure Australia template resulted in the inclusion of stronger technical cases and context for the projects that are proposed. These included economic evaluations including Wider Economic Benefits (WEBs), reviewed by prominent economic consultants. The document is prefaced by letters from these economists rather than the Premier and Ministers, itself a significant change in flavour towards evidence-based planning.

On the other hand the submission to Infrastructure Australia raised an issue in regard to the process being followed. The North West and South West Rail Links had both been subject to the Part 3A Environmental Assessment process, introduced in 2005 to the Environmental Planning and Assessment Act 1979 to deal with major projects. Each of the Rail Links was subject to an exhaustive assessment which, in the case of the North West link resulted in a variation to the project linked the line directly into the Epping Chatswood Rail Link at Epping. The project was approved in this form by the Minister for Planning, albeit under the title 'The Western Portion of the North West Metro' (Minister for Planning 2008). The later Infrastructure Australia submission reintroduced an earlier surface connection to the Main Northern line that had been rejected under the 3A determination. Close examination of the document suggests that, while the economics had been updated, the project had not – project documentation cited was all 2007 and earlier (p72ff). Mapping in the Metropolitan

Development Plan (Department for Planning 2010) reverted to this as well. The statutory planning process result is being followed by the new government in the North West Rail link design. Even so there were calls to change the route (Saulwick 2011), in some cases quite radically (Parramatta City Council 2011), and in one case by an organisation purporting to represent a community that stood to benefit from the planning decision (Howlett 2011). It would appear that Sydney's transport planning equivocation remains entrenched in some parts of the community.

7. Conclusion

This paper has sought to provide some insights into the path taken in implementation of transport plans, particularly the public transport infrastructure component, reaching back some fifty years to the first generation plans. Particular focus has been placed on the recent Sydney paradigm, where there has been a major lack of evidence-based planning, and where politics and the media have played major roles. The history, particularly the events in the four years to 2010, clearly shows the lack of continuity that has been evident in Sydney's transport planning. This might have succeeded as an attempt by an entrepreneurial element within government to break out of a particular paradigm; however its failure suggests that the present may be with us for a while longer and only the project priorities have changed.

In path dependence terms there have been a number contingent events, or paradigms, that have driven the process. The first and most obvious has been the instability that had been a characteristic of the New South Wales State Government in recent years. The second has been the lack of evidenced-based project prioritisation, underpinned by Treasury resistance to new rail developments. The third has been the opportunistic promotion of the Metro (in various guises) as the solution to Sydney's transport problems. The role of the print media and the Herald campaign has also been a factor. Less obvious is that there has been no real microeconomic reform of the rail transport delivery agency RailCorp, as has occurred in the rail freight sector. The intersection of these paths, and the earlier factors that established the City Railway in its present form, have led to the position that Sydney is in today. The 1974 Sydney Area Transportation Study – its first generation comprehensive plan – has had virtually no influence on the rail network.

Sydney has a much higher dependence on its rail system than any other Australian city. Whatever issues it may have in supply, it has the highest transit mode share of all the capitals by a large margin. Its motorway system, Australia's second largest in length, has been built substantially, albeit by the private sector. The rail system envisaged in its first generation plan remains substantially incomplete and the plans have changed. The evidence in this paper is that Sydney's major problem since the Sydney Area Transportation Study is not the plan but the planning process. There is no question that the process has failed to deliver. It has been a Sydney characteristic that urban rail projects invariably have convoluted histories – the one hundred-year evolution of the Eastern Suburbs Railway being a most fascinating example. The last twenty years have seen a crescendo in this paradigm, linked to the path of changing premiers, political decision-making, questionable equity in distribution of public infrastructure and lack of evidence in the plans. Even now there has been a change in State government, the major rail projects have been justified after the fact, if at all. The North West Rail Link has been subject to rigorous statutory and economic evaluation at various times, but took the change in government to bring it forward. The South West link is under construction without the promise of the town centre that it is to serve being built for many years. There is Commonwealth money available for a rail link that the state has accorded no priority. And there is no solution on the official table for the capacity problems of the central business Global Arc corridor or the western line.

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