

A Future for Regional Passenger Trains in New South Wales

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Appendices

Revised 30 November 2004

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Introduction

These appendices provide additional material to support the summary report ‘A Future for Regional Passenger Trains in New South Wales’ published in October 2004 by the Centre for Rural Social Research, Charles Sturt University and the New South Wales Local Government and Shires Associations. From time to time further material may be added as it becomes available.

This revised version includes an amendment to the map in Appendix 3, correcting missing data in the base map which prevented the inclusion of a 1987 service to Tenterfield. The maps published in the Summary Report, including a corresponding correction to the 1987 services map, are reproduced also.

Appendix 1: Methods of Study

Introduction

The project was designed to obtain information on the social, economic and environmental issues relating to regional transport from the broadest perspective possible in a short timeframe. The information required included

1. geographic and other information on the New South Wales railway network and how it has been and is currently operated
2. data on present and past services
3. indicators of need for rail services and the sources of need
4. the value of train travel to those who benefit from it
5. the range of local issues which access or lack of access to passenger train services raises
6. the factors which inhibit the use of train services
7. the factors which may limit choices between modes of transport being made by travellers
8. attitudes to train travel in the context of travel practices among regional people
9. attitudes to issues related to train services among regional people
10. background on rail and other transport issues

Item 1 above was obtained from a range of publications including *Railway Digest* and *Track and Signal* magazines, Annual Reports and other material on the RailCorp and its predecessor organisation websites, other railway organisation websites, the Australian Railway Historical Society Resource Centre and other material as listed in these appendices. Item 2 was obtained from present and past public timetables. Items 3 to 7 were obtained in focus groups and interviews with members of the public. Items 8 and 9 were obtained by means of a telephone survey. The focus groups, interviews and telephone survey methods are described in detail below. Item 10 was obtained from research literature as discussed in these appendices.

Focus Groups

Focus groups were conducted in Mudgee, Mullumbimby, Murwillumbah and Dubbo. Each had between six and eight participants. These locations and the participants were selected to provide a range of perspectives on passenger train services. The range of related issues can be identified along several dimensions:

- proximity to Sydney
- a range of train timetabling issues
- presence of social issues
- presence of economic development issues
- presence of environmental issues
- presence of issues related to remote settlements
- relative significance of local and longer distance travel concerns

- the extent to which community concern had been expressed for the future of train services

Participants were selected to ensure representation of this range of concerns. Participants included business representatives, including but not only tourism organisations, commuters, parents, the elderly, disabled people, health and welfare advocates, local government and other public sector representatives.

All focus group sessions were facilitated by the author. Discussions were started with a request for information on how the public transport system, not just rail or CountryLink, went about servicing the needs of the people in each area. Each group took a broad perspective, but for some of the session tended to focus on particular issues of concern, as people explained their perspectives based on their personal circumstances and their knowledge of others. For example, the Mudgee group raised and discussed issues related to day travel to Sydney. The Dubbo group developed its focus on the question of balancing the needs of regional city people with those of people who lived in remote locations. The Northern Rivers groups discussed the problems of people who needed trains for health or age reasons, but also focused on the problems arising from lack of public transport in the region. All groups encountered the issues which confront the elderly and people with health problems when they look for means of transport, sometimes discussing intimate and delicate topics. Sessions were from one to one and a half hours in duration.

All focus groups were digitally recorded, replayed twice and selected passages transcribed directly into the Nvivo qualitative analysis computer software package. The data were coded as they were transcribed.

Interviews

Formal interviews of one to two hours duration with between one and three participants were held in the Southern Highlands and Lismore. Informal interviews of were also held with community representatives in several locations. The formal interviews addressed the concerns of particular groups, being commuters from the Southern Highlands and young people (as perceived by parents and youth workers) in the Northern Rivers. A similar approach to that of the focus groups was taken – starting with the overall context and then placing rail transport into it. The formal interviews were digitally recorded, replayed twice and selected passages transcribed directly into Nvivo. The data were coded as they were transcribed. The informal interviews were not recorded.

Telephone survey

Two areas were selected for the telephone survey, being Lismore and Wagga Wagga postcode areas. They were selected due to their geographical differentiation in terms of distance from Sydney while both being large regional centres. They also differed in terms of the extent of concern expressed about the future of rail transport.

1 469 telephone numbers with corresponding names and addresses were selected using a random generator and a telephone number database. Letters were sent to all names/numbers drawn explaining the project and asking that they talk to our

interviewer when we call. 118 letters were returned. 88 numbers were discarded as they were either business, mobile phone or fax numbers. We were unable to obtain answers from 293 after three call backs when the time limit for the survey expired. Of the 970 people spoken to, 304 agreed to be interviewed. One interview was terminated. This represents a response rate of 21 per cent of the numbers initially drawn, or 31 per cent of those contacted. Explanations for refusal were recorded. Some indicated that they were too busy, while others said that they did not travel. Many said that they were too old. There appears to be no pattern of refusal which would bias the sample.

Interviewers were briefed about the purposes of the survey, the procedure for obtaining random selection within households by (means of asking for the person whose birthday comes next) and the intention of each of the questions was clarified, including possible differences in perspective between the two locations. Interviewing was supervised by staff at the Centre for Rural Social Research Computer Aided Telephone Interviewing facility.

The sample was checked against Commonwealth Census data for representativeness in terms of age and sex. It is skewed towards women, numbering about two-thirds of respondents, and slightly skewed towards older age groups. This may reflect an inherent tendency of telephone surveys to sample for single person households. Many of the issues under discussion will be of greater significance as the population ages. Hence the small skew was not considered a significant problem. The data are presented as collected, that is without weighting, although where gender differences may be significant, male and female responses are presented separately.

The interview schedule consists of questions to

- establish location ie Lismore or Wagga Wagga (not asked) and basic demographics: age, sex and occupation
- indicate travel practices by asking about patterns of modal choice for trips undertaken during the previous three months
- indicate the possibility of mode selection based on habit rather than deliberate choice
- indicate the decision process and purpose of a recent long trip
- seek ranking of travel modes in terms of their relative costs
- ascertain the proportion of trips which had been made by the different modes
- indicate attitudes towards car, train, coach and air modes in terms of safety, costs, convenience, timing, nostalgia, enjoyment and environmental implications

In designing the schedule, use was made of the work of Cullinane, S. (2003) 'Attitudes of Hong Kong residents to cars and public transport: some policy implications' *Transport Reviews*, 23 (1): 21-34.

and

Matthies, E., Kuhn, S. and Klockner, C.A. (2002) 'Travel Mode Choice of Women: The Result of Limitation, Ecological Norm, or Weak Habit?', *Environment and Behavior*, 34 (2): 163-177.

All attitude questions used the familiar Likert scale from 'strongly agree' through 'no opinion' to 'strongly disagree'. Questions varied in terms of positive/negative slant

towards train travel and wherever possible were neutral (for example, the enjoyment questions were asked in the same way of each mode starting with car). Data were entered directly into SPSS, checked and analysed.

The methods and findings were discussed with many people during the course of the project, as indicated in the Report's Acknowledgements.

Appendix 2: Why Trains? Some background and survey findings

Background

The following section offers background on the significance of railways as transport systems. It is an abridged version of part of a paper delivered by the author to the Academy of Social Sciences Workshop on Participation and Governance in Regional Development, Hamilton, 30 June to 2 July, 2004.

Why Bother with Trains?

Does the condition of transport systems have significant implications for regional development? This issue has been discussed extensively (see for example, Burkhardt, Hedrick and McGavock, 1998; European Conference of Ministers of Transport, 2001; Organisation for Economic Cooperation and Development, 2002; Vickerman, Spiekermann and Wegener, 1999 and in Australia Bureau of Transport and Communications Economics, 1992). This debate is more about whether or not transport services can stimulate growth or merely increase efficiency and clear bottlenecks. Some believe that fast rail services can substantially alter patterns of development (Peeters, 2000). Fox and Porca (2001) argue that provision of regional transport should be geared to existing demand, and there is some consensus that transport can only increase growth, not create it where there is none or no prospect for it. There is also debate about the urban agglomeration effects of transport in the context of international trade liberalisation. In this context, Mansori (2003) argues that transport can help to diffuse development away from large cities. Some governments, including those of industrialised countries, have seen transport infrastructure underpin if not stimulate development (including the USA - see Stephens, Laughton, and Lam (2003) who also discuss Townsville in this context). The debate is about the extent of significance to be given to transport, not whether there is any such significance.

We can expect overall demand for transport services to increase. The AusLink Green Paper (Department of Transport and Regional Services (2002: 12)) predicts the national freight task to double in 20 years, with growth in non-bulk freight being only a little greater than growth in bulk freight where rail predominates, although interstate road freight is expected to triple (but may not increase so rapidly if rail infrastructure is improved). Total domestic resident passenger travel is projected to grow much more slowly at about 1.9 per cent per annum, with road continuing at about 85 per cent of movement and rail continuing to lose its very small share to air in all but inter-capital city travel (Mitchell and Sidebottom, 2002: 139). However, the projections in the report by Mitchell and Sidebottom may not reflect the true value and viability of rail, as discussed in Appendix 4 below. In addition, Mitchell and Sidebottom do not account for the possible effects of regional rail infrastructure renewal like Victoria's Regional Fast Rail Project (see Laird: 2003) which will service the 'inner regional' areas where rail usage is higher (Bureau of Transport and Regional Economics (2003: 24).

Regional rail services have contracted in all States particularly since the 1970s, but those which remain are important. Most branch lines were built at a time when the alternatives to rail transport were very inefficient. Improvements in road transport

have drastically changed the relative efficiency of rail for most types of freight since the 1950s. Over the same period, the use of motor cars and the growth of airlines have seen regional passenger rail traffic dwindle to very small proportions of total movement. Legislated protection of government rail services has been removed and even bulk commodities which rail handles most efficiently are now also moved by road, sometimes over long distances. This was not possible in the nineteenth and much of the twentieth century. But now that it is possible, serious questions have arisen about desirability of such extensive use of road transport for bulk commodities in regional areas as well as non-bulk freight in the cities.

Some argue that road transport has been given a competitive advantage over rail because road users are provided with infrastructure at relatively little cost to themselves. The railways have had to pay for their tracks entirely. This argument is a little simplistic, but the view that our transport funding is unbalanced in favour of road is widely held and extensively argued (see Laird, 1998 and Laird et al., 2001). It is also expressed by governments. The AusLink Green Paper accepts the point. The Standing Committee on Primary Industries and Regional Services (2000) seems more interested in interstate routes but does point to regional problems arising from the absence of rail service and the costs to government of road provision and maintenance, such as the \$4.5 million the Victorian Government spent on roads as a consequence of the isolation of the Port of Portland from much of its hinterland after the standardisation of the Melbourne-Adelaide railway (p. 185). The high costs of road traffic between Toowoomba and Brisbane where the rail infrastructure is inadequate are also cited (p. 187). The principle applies wherever the infrastructure exists and rail can offer a viable alternative to road, simply because of the engineering physics of steel wheels rolling on steel rails. The committee acknowledges these problems and advocates obtaining 'competitive neutrality' between rail and road as a means of addressing them. Appeals from local government are not so theoretical. Councils fearing a transfer of costs to them as branch lines are to be closed have been common, and are particularly frequent in New South Wales this year following a government proposal to close several grain lines.

Many governments are looking for means to find a better balance between rail and road, although there seems to be more enthusiasm overseas, particularly in Europe, than in Australia (see for example Directorate General for Energy and Transport, 2001). As Shaw and Walton (2001) argue with regard to the UK, governments may be unwilling to scale back provision of road infrastructure despite trying to appear to support rail. The inefficiency of transport systems has been identified as an environmental issue, most obviously as a source of urban air pollution, but also more broadly. Tedesco and Thorpe (2003: 8) show that transport and storage is the second largest energy-using sector in Australian industry. It accounts for 27 per cent of energy consumed in 2000-01, with private cars accounting for just under half, down only one per cent since 1973-74. There is much room to improve the environmental efficiency of transport by increasing usage of our railway systems.

From the regional perspective, rail has provided much highly valued employment, despite the centralisation of control in the State capitals. Like railways in North America, Australia's railways became significant regional institutions as employers, educators and foci of social life in cities, towns and remote places. Analysis of the effects of rationalisation goes back to Cottrell (1951) in the USA. In Australia, the

effects of diminishing regional railway employment have been noticed (see for example, Henshall Hansen Associates, 1990). When employment rationalisation loomed in the late 1980s, the Bureau of Transport and Communications Economics (1992) predicted increasing regional unemployment because there would be insufficient local demand for labour to make jobs available to all those who directly and indirectly lose them. Appeals for branch line retention continue to cite employment effects even though road transport has become a significant employer in many towns. With the possible exception of some of Queensland's coastal cities and the towns in which the iron ore railways of Western Australia are based, employment in the regions has not generally been advantaged by the developments which have occurred in railway services since the 1970s. Nevertheless, the now widely-acknowledged environmental advantages offered by rail over road are the most powerful arguments in favour of achieving a better balance between the two modes, alongside the relative technical efficiency of rail which is obscured by the infrastructure supply advantages obtained by the road freight industry.

Safety can be placed among those environmental advantages given the record of the road freight industry as sometimes acknowledged by its own organisations and recorded in the press (see for example Skinner, 2000). Truck accident rates improved since the 1980s but have deteriorated since 1997 (Australian Transport Safety Bureau, 2004) and may be hard to turn around (Department of Transport and Regional Services, 2002). It is quite reasonable to argue that significant improvements to regional transport in terms of economic efficiency (reducing costs which in principle is what the railways did in the nineteenth century), promoting regional development and equity and improving the safety and well-being of urban and regional dwellers can be achieved by improving the balance between the regional land transport modes.

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Survey findings

The focus groups and interviews revealed many people's situation which would not normally be revealed. It is easy to see the people who travel. They are out there on the highways in their cars; they can be seen at airports, getting on and off coaches and at railway stations. They also appear in official statistics. But those who do not travel are invisible. Their lack of mobility is apparent to them and possibly also their friends and relatives, but is not readily apparent to policy-makers. The reasons for this condition are related to factors like age, health and disability. There are also issues for young people and their parents. Indications of these problems are set out below in the form of quotations from focus groups and interviews.

Age

Travelling today for us older folk, and I've spoken to a number of them, for the ones who have had hip problems or knee problems they really find it difficult to climb on board the coach. As you know, they sway as they go along. If these people wish to use the toilet - have you tried it on a moving bus? You should try it, it's an experience! ... especially on our country roads. It's not a smooth highway like the one down to Canberra

People who have poor mobility and that and need to get up and walk around ... they are unable to do that... need to walk around, toilet, have a snack - dietary problems.

There's a sign [in the coach] saying use toilet facilities only in emergency. They even announce it over the PA - doesn't do the incontinence part any good.

I do hear people say the same thing that I won't go and that's because of issues for the elderly, getting on the bus to somewhere and then having to get back off the bus.... It's increasing isolation.

Disability

What happens is more and more and more we don't go anywhere. The saddest story I ever heard were the people who had a son who was injured in a car accident and while the train was going he could wheel himself onto a train at ... and he could wheel himself off here at As soon as that train ceased the boy couldn't come here any more to visit his parents. That joy was taken away from him because the train stopped running.

If I wanted to go to Sydney, I live in ..., and obviously I've got mobility difficulties, and I can hop on a train, whereas I don't drive and I've got to get someone to take me to an airport and all the things that are involved in that ... In an age when you'd think transport would be improving certainly I'm not sure if you're aware of the disability transport standards where they're making rolling stock more accessible I would have been looking for increased access... The bus that now takes people to ... I can't get on. So it's not accessible at all.

I couldn't go from here by coach and get off at ... I have emphysema so I can't do up and down walking and taking cases... I'm not on my own about that - there's a lot of us. If I could get on a train here and go all the way to Sydney - fine... Apart from that I pay \$100 to go by community car... That's a return trip unless you're coming back next day. Then you pay twice.

I have a friend with intellectual disabilities... She comes up on the train ...but with change of service... She just won't go. It all needs to be fairly smooth and fairly easy and the train was.... She rang me quite distressed because the train had broken down. 'They've taken my luggage.'

For these people, loss of train travel means loss of mobility and loss of independence.

The Commonwealth has legislated Disability Standards for Accessible Public Transport, having come into effect in April 2004. (See <http://www.ag.gov.au/DSFAPT/Welcome.html>)

However, these will not alter all coaches for at least 20 years.

Community Transport services were sometimes praised, but not seen as a substitute due to eligibility rules, costs, having closed books (not accepting more clients), reliance on volunteers and being a 'band aid'.

Youth (and their parents)

If you're on the train all day the kids can wander around the carriages and talk to other kids... but when I came back on the bus with my nine year old, it was the worst trip I've ever done because he had to sit in his seat and he couldn't go anywhere... and coming back at three o'clock in the morning...

People moved from Sydney with kids anticipating public transport due to growth. They want kids to be able to get around 'so they don't have to drive'

Kids getting to ... would have to change buses and take a long time 'but if they could get a train they're safe all the way'.

A lot of people use the night train so the kids sleep... but now you have to get off the bus at midnight, get on the train.

'You don't want your granddaughters to be hitchhiking to ...'

School excursion kids came back on the train 'and we had to drive across to ... at three am - wasn't practical to get them onto the bus at ... 3am.

A teacher who used to do day trips to Sydney on an excursion for high school students – 'But the demise of the rail meant that we had to hire a bus... and that put extra cost on and it took longer for them to travel by bus and bus had to find somewhere to park and it ended up too expensive'.

Train travel is inherently a socio-cultural experience. It is shared among many people in contrast to the individualism of the highway. The sharing provides security, in addition to the reputation for helpfulness and the skills of train crews. All passengers and their families benefit from that security, in addition to the inherently greater safety of train travel.

Appendix 3: A Changing Network: The historical context of lines and closures

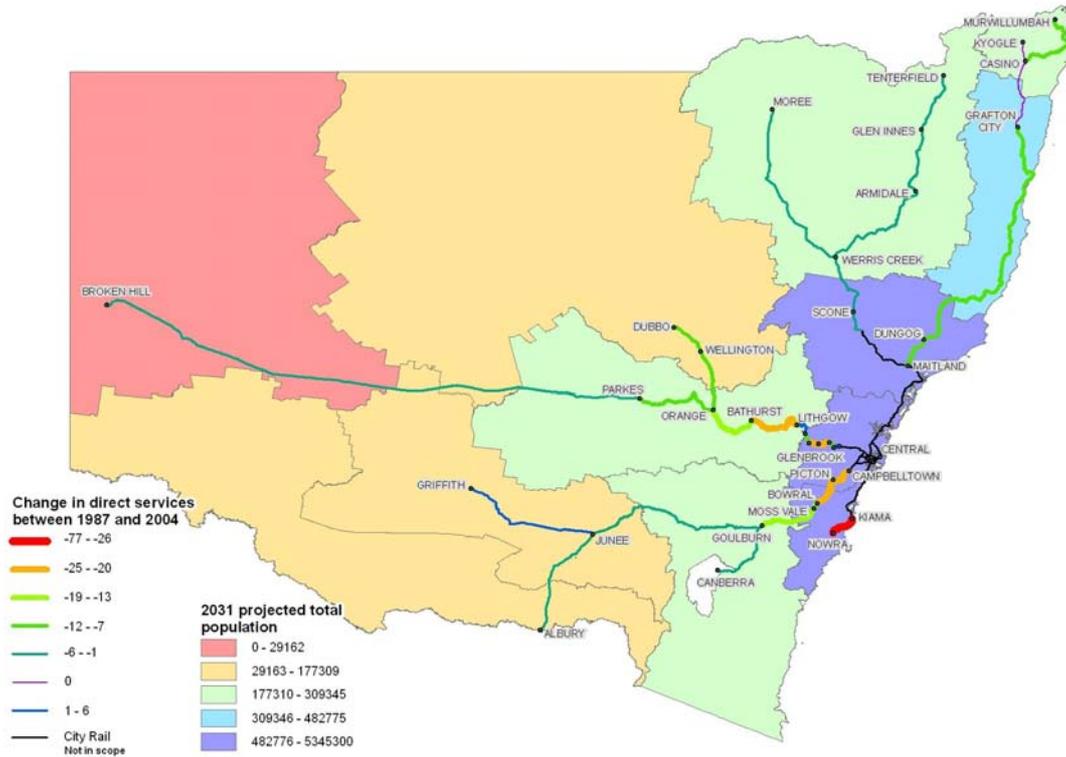
This appendix presents

1. a map of change in direct train services since 1987 and current population projections (revised 30 November 2004). The map shows that some of the statistical divisions which are projected to grow to the higher population sizes have lost more services than others. Note that the map shows total population size in each statistical division area.

Maps 3, 4 and 5 (with corresponding correction to Map 3) from the Summary Report have been added to this revised version (30 November 2004).

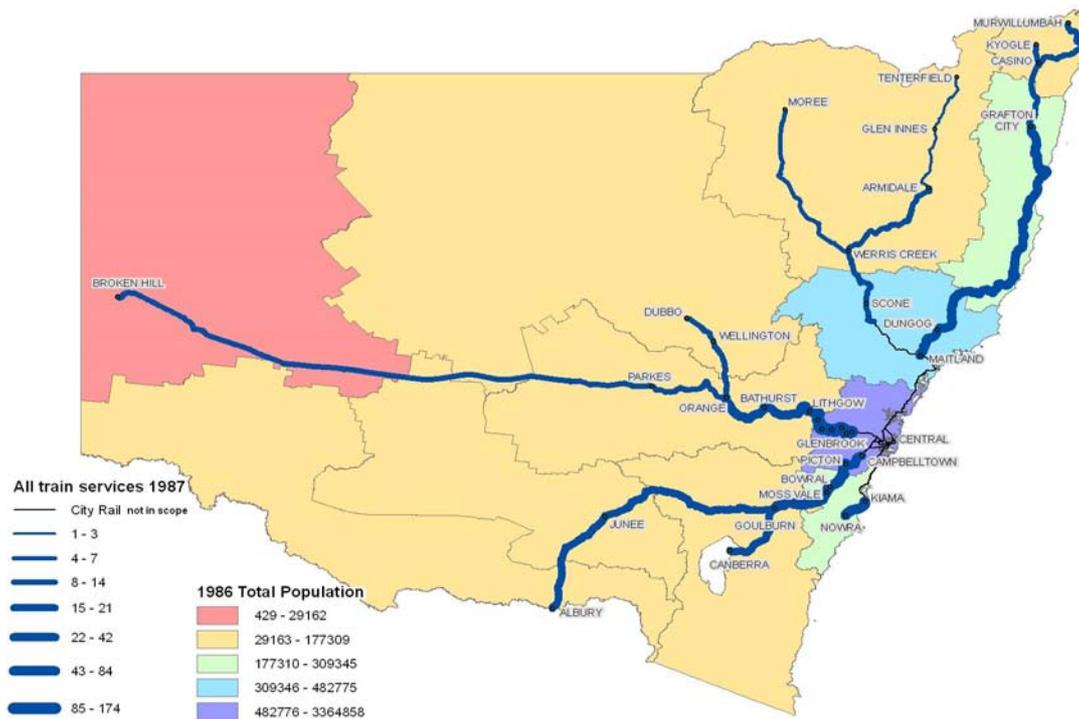
2. some historical information, prepared by railway historian Jim Longworth. It plots the history of the railways of New South Wales as it discusses the processes of closure.

Map 1: Change in frequency of direct return train services to Sydney 1987 to 2004 and population projections to 2031 (revised)



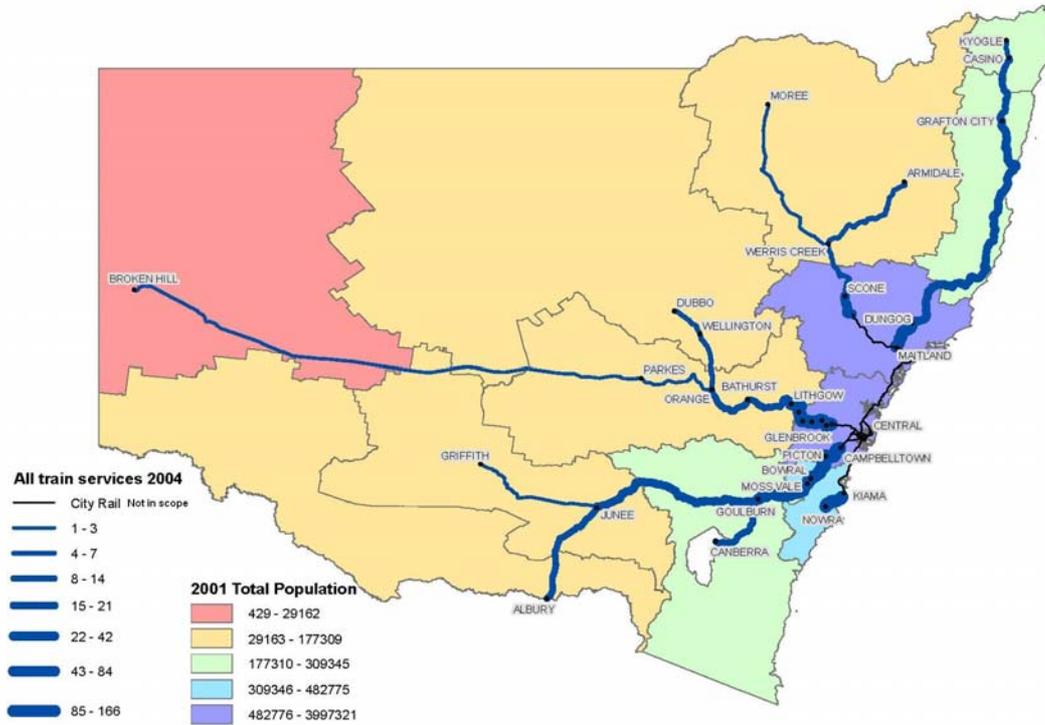
Source: Public timetables and NSW Transport and Population Data Centre projections.

Map 2: Service frequency (return to Sydney per week) and population, 1987 (revision of Map 3 in Summary Report)



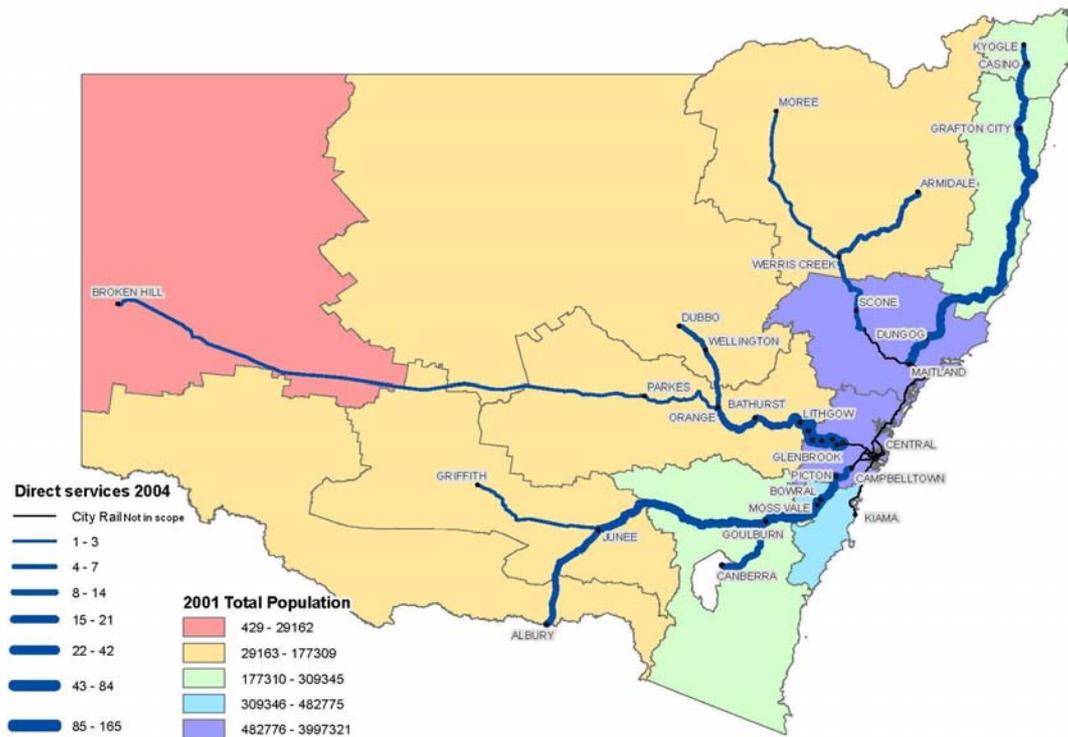
Source: 1987 public timetables and 1986 Commonwealth Census

Map 3: Service frequency (return to Sydney per week) and population, 2004 (Map 4 in Summary Report)



Source: July 2004 public timetables and 2001 Commonwealth Census

Map 4: Direct service frequency (return to Sydney per week) and population, 2004 (Map 5 in Summary Report)



Source: July 2004 public timetables and 2001 Commonwealth Census

2. Closure of Railway Lines in NSW: 1855 – 2003

Jim Longworth

Introduction

This section establishes the historic scale and pattern of railway line closure across NSW, by analysing line opening and closure between 1855 and 2003. The length of line is a quantitative measurement that indicates change, growth, stagnation and decline, in the produced economic capital resource of the NSW government railway network.

Existing Knowledge

Many railway histories concentrate on expansion of the network and do not feature line closure. Gunn's (1989, p.493) map of rationalised country lines omitted showing many closed lines in NSW.

Line openings/closures and length of available track were graphed by Bozier (n.d.). Both Bozier (n.d.) and Quinlan & Newland (2000) mixed up government and private industrial railways. Laidley (2002) produced chronologies of line openings and closures (n.93), and quantified the total length of closed government lines as 2,883.32km to 30 June 1996, but included some though not all relocations and deviations and is now out of date.

Research Methods & Analysis

A railway **line** is taken to be a length of railway track connecting separate geographic places, as distinct from a siding contained within a single geographic place that is part of a larger railway.

Data on lines closed between 26 September 1855 and 30 June 1996 was sourced from Laidley (2002), and from 1 July 1996 to 31 December 2000 from Quinlan & Newland (2000). Data on lines closed between 1 January 2001 and 31 December 2003 was collected from network changes recorded in the railway organisation's *Weekly Notices*. Line deviations and relocations were not included.

Data on line opening and closure from 1855 to 2003 was entered into a Microsoft Excel spreadsheet for analysis. Distances were expressed in route kilometres end to end of a line, not kilometres of individual tracks in multi-track sections. Single-tracking of multi-tracked lines was not considered as line closure. Being continuous, data was displayed in line graph form, with date on the independent variable x-axis, and changes in the network on the dependant variable y-axis (Figure 1).

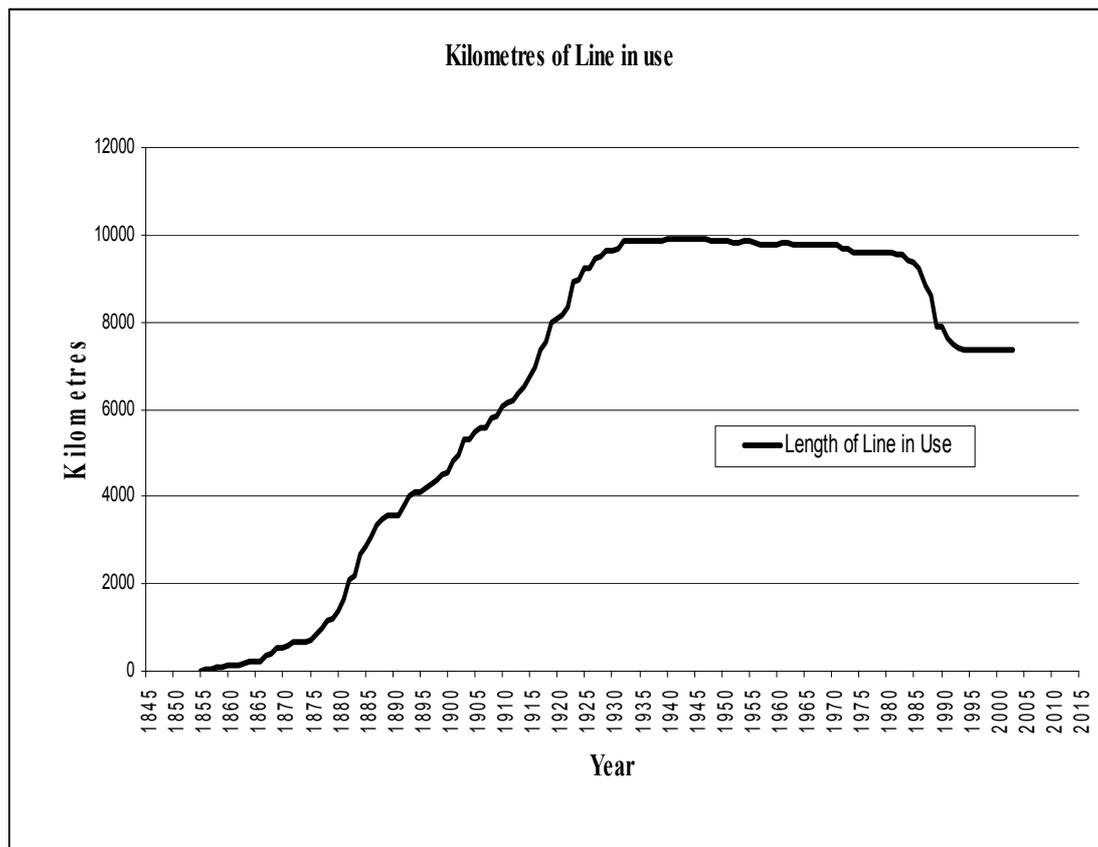


Figure 1

Analysis of the data after they had been expressed in graphical form (Figure 1), revealed four eras, each bounded by significant changes in network geography. The first era (1855 – 1932) was characterised by general expansion of the network. The second era (1933 – 1983) was differentiated from the first era by a marked slowing in the rate of extending the network and some closures. The third era (1984 – 1994) was differentiated from the second era by a marked increase in the rate of closing lines. The fourth era (1995 – 2003) was differentiated from the third era by a marked slowing in the rate of closing lines and some minor extensions.

Line Closure

Webb (1963; 1971) suggested that reasons for closing individual railway lines were:

1. That the line had been constructed for political reasons in an area that subsequently failed to develop.
2. Loss of traffic to road transport.
3. That the line had been constructed to develop resources that were subsequently exhausted or abandoned.
4. That the line had been constructed to Pioneer standards that subsequently became uneconomic to maintain.
5. Decline of regional ports.

Transport is a derived demand, undertaken when needed for activities pursued at one or both ends. Provision of alternative transport modes offers greater choice to users so may influence usage. Reason/s for increased or reduced demand may be beyond the control of railway management, so this study considered the espoused

rationale/s of railway management for closing a line. Webb's (1963; 1971) reasons: 1, 2, and 4, are not sufficiently exclusive so should be combined. Reason 5 is not relevant to NSW regional lines, but has been relevant to closure of sidings in regional NSW towns, eg: Byron Bay; Coffs Harbour; Lismore; Grafton; Macksville, and Menindee.

In NSW a government railway line is closed by (Laidley 2002):

1. An Act of Parliament.
2. Decommissioning by management, involving minor physical and/or operational alterations, but leaving the railway substantially intact.
3. Conversion into a siding by abolishing the safe-working equipment.
4. Damage by natural phenomena.
5. Ceasing to operate, but involving no physical works.
6. Dismantling the track.

Closing a line was more than just ceasing to run trains. Closure was a deliberate managerial decision to systematically and physically prevent trains from running in the future. Material changes were made to the infrastructure and safe-working systems. Prevention was deeply rooted in the organisation's safe-working culture, wherein trains did not move unless the line had been certified safe for traffic. In NSW, closure of a railway line was legally defined as "*if the land concerned is sold or otherwise disposed of or the railway tracks and other works concerned are removed*" (NSW Transport Administration Act 1988, s.93 (1) and (2)), and required an Act of Parliament (1). Removal was not quantified. Closure by instruments 2, 3, 4, 5 or 6 retained the line as a legal part of the network, though trains were not required to be run on the line, nor were lines over which train services were not operated required to be maintained. While damage may cause traffic on the line to be interrupted, damage was not rightly a closure instrument. Many damaged lines have subsequently been repaired back to an operational condition.

Line Closure: 1855 – 1932

Between the ceremony of turning-the-first-turf on 3 July 1850 and opening of the Unanderra to Moss Vale line on 20 August 1932, 9,966.85km of government railway line route was constructed in NSW. Growth averaged 121.55km/year. Over the five years 1879 – 1884 the network grew by 120% as lines were constructed towards state borders, to increase inland trade and develop the colony. The 1881 – 1884 period has been called 'The Great Railway Years' marking the period of greatest relative network growth. 479.54km of line was opened during 1884, the longest length ever opened in one year in NSW.

Between opening of the first section of line from Sydney (now near Redfern) to Parramatta (now near Granville) on 26 September 1855 and 1 February 1932 seventy-seven years later, 116.13km of line were closed. Closures were 1% of the then network, at an average but highly variable rate of 1.51km/year. There were eight closures, with an average length of 14.52km/closure. Five of the closures were connected with mining ventures that had been closed so removing the lines' prime function. Only the Westmead to Rogan's Hill line was closed on the basis of poor operating economics. The line was losing nearly £25,000/year.

The 1850 – 1932 era was characterised by almost constant expansion of the network. Construction indicated ongoing and significant investment of capital funds by the state government in extending regional railway transport infrastructure. Capital funds were supplemented by subsidising maintenance and operating costs for keeping many uneconomic regional lines open. Closures were mostly of minor branch lines

that had served mining areas but were closed down, metaphorically pruning-off dead twigs. The era concluded with the onset of the Great Depression, after which government capital was diverted into developing infrastructure for other forms of transport.

Line Closure: 1933 – 1983

Following onset of the Great Depression and appointment of the commercially focussed Mr W.J. Cleary in December 1929, work on constructing new lines was to cease (SMH 15 February 1930). Cessation actually took nearly three years to take effect, because “*the railways differ from a business in that the Government has the final say in the laying down of lines, but the Commissioners have to carry, in their final statement of revenue and expenses, the interest on those lines*” (SMH, 19 December 1929, p.11). After opening of the 61.9km long Unanderra to Moss Vale line on 20 August 1932, construction of new lines plateaued, until closures started to erode significantly into the size of the network. Across the plateau between 1933 and 1983 only 220.92km was added to the network, an average of 4.42km/year, increasing the length of the network marginally to 10,187.77km. During thirty-three of the fifty years no new line was constructed. Overall length of the network peaked at 9,896.16km over the 1942 – 1946 period. One line, the 102.85km long Sandy Hollow to Ulan line accounted for 47% of the increased length.

Over the same fifty year period 517.74km of line was closed, 5% of the then network, at an average but highly variable rate of 10.35km/year. The length of closed lines was more than double the length of opened new lines. The 517.74km contained twenty-five closures, with an average length of 20.71km/closure.

The 1933 – 1983 era was characterised by little expansion of the network but the status quo was substantially maintained, indicating the degree of political interference in railway management to keep uneconomic lines in operation. Closures were mostly of minor branch lines, metaphorically trimming-off unwanted branches.

Starved of capital funds that precluded extensions and burdened with a mounting capital debt, the organisation could not expand the network. Neither could it close lines, because “*The Commissioner has no power to close a non-paying line.*” (Paddison 1955, p.235).

Community understanding of keeping the line open included running train services. However the legal definition of ‘closure’ by Act was not the polar opposite of open in popular usage. Ambiguity of the term ‘line closure’ blurred conceptual boundaries and reduced potential conflict between elected politicians and regional voters. Politicians could claim to keep a line ‘open’, by not ‘closing’ it, while railway management did not actually run any trains on the line. An organisational language developed to describe lines kept legally ‘open’ but not operated on, eg, ‘disused’, ‘mothballed’ or ‘decommissioned’, or train services were ‘suspended’.

Line Closure: 1984 – 1994

Over the ten year 1984 – 1994 era only 29.83km of government railway line was constructed in NSW, marginally increasing the length of the network to a total of 10,217.6km.

Over the same period 2,239.12km of line was closed, bringing the total length of closed line to 2,872.99km. Closures for the era represented 22% of the then network, closed at an average but highly variable rate of 223.9km/year. The

2,239.12km was made up of fifty-five closures, an average of 40.71km/closure. Lines closed during this period comprised 78% of the total length of closed line to 2003.

David Hill, CEO of the SRA from 24 June 1980 to November 1986, reportedly said that '*I am not looking at the elimination of any branch lines in the country*' (Gunn 1989, p.513 quoting an unreferenced 1980 source). However, the era was characterised by more extensive closures and a much faster rate of closure. The greatest length of line to be closed in a single year 1989 was 717.14km, one and a half times the maximum length opened in 1884 during the height of The Great Railway Years. The decade 1984 to 1994 saw the network shrink faster than at any other time in NSW railway history.

The 1984 – 1994 era was characterised by rapid contraction of the network resulting from frequent closures. Closure indicated ongoing and significant government withdrawal from the provision of regional railway transport infrastructure. The operable network shrank faster than it grew. Not only was state government not willing to fund extensions of the network, it was no longer willing to fund maintenance and operation costs to keep many existing uneconomic regional lines open. New managers introduced a new mythology to railway management. The railway was no longer seen as a vital public service in support of the state, but was expected to operate at a profit or at least at no net loss. Closure involved major regional branch lines, eg, Queanbeyan to Bombala, and some main trunkline routes, eg, Dumaresq to Wallan-garra.

Apart from the special case of closing the Dorrigo to Glenreagh line by passing the *Glenreagh to Dorrigo Railway (Closure) Act* (1993), that was enacted solely to facilitate development and operation of a proposed tourist railway by private interests on the disused branch line (*NSW Legislative Assembly Hansard* 27 October 1993), the last closure by Act had been the Campbelltown to Camden line in 1963 (*Campbelltown to Camden Tramway and Jerrilderie towards Denilequin Railway Act* 1963). No other lines have since been closed by Act of Parliament in over forty years, suggesting there is reluctance by government to legally close lines.

Line Closure: 1995 – 2003

Over the eight year 1995 – 2003 period only 16km of government railway line was constructed in NSW bringing the network to a total length of 7,353.91km in use. All of the new lines were within the Sydney metropolitan area, eg, Olympic Loop and New Southern Railway to the airports. The only new track laid in regional NSW was in the form of balloon loops and sidings, not for new lines.

Two lines that had previously been closed were reopened. The 75.25km long Cowra to Blayney line that had been closed on 6 October 1987, was reopened on 17 December 1999. The 90.64km long Kandos to Gulgong line that had been closed on 2 March 1992, was reopened on 25 April 1997. These reopenings were not included in this study's calculations as new lines, because reopening the lines involved track repair and rebuilding, but no new construction work so the length of the overall network was not extended.

Over the same period 4.7km of line was closed bringing the total length of closed line to 2,879.69km. Closures for the period represented 0.06% of the then network, closed at an average but highly variable rate of 0.59km/year. The 4.7km was made up of three closures, an average of 1.57km/closure. By the end of 2003 a total of 2,879.69km of line had been closed in NSW, over 28% of the total constructed line of 10,233.6km.

The 1995 – 2003 era was characterised by expansion in the Sydney metropolitan area, but none in regional areas. There were only three minor closures in the metropolitan and none in regional areas. A surprising result given the government's concern for pursuing microeconomic reform.

Between 1 January and 31 December 2003, six grain-only lines and two passenger-only lines were considered for possible closure. As single-traffic lines, withdrawal of either grain or passenger train services respectively would have removed the justification for maintaining the line in an open condition.

Within the metropolitan area, the 4.22km long Hamilton Junction to Newcastle passenger-only line was likewise considered for possible closure. Thus during 2003, 752.54km consisting of nine lines was considered for possible closure, an average length of 83.62km/closure, 10% of the then network in use.

Conclusion

By studying the geographic history of the railway network of NSW, this section has audited change through time in the produced economic capital resources of the infrastructure of railway lines. Over the 148 year long 1855 – 2003 period government provision of railway lines has varied significantly. Provision of lines fell into four clearly differentiated eras: 1855 – 1932; 1933 – 1983; 1984 – 1994, and 1995 – 2003. Progression from era to era indicated changes in government policy towards the provision of regional railway service infrastructure.

As at 30 December 2003 a total of 2,879.69km out of an overall constructed network of 10,233.6km, i.e. 28% had been closed. Closure of lines has been a large scale geographic phenomenon across regional NSW, touching each of the coastal lowland, eastern highland, western slopes, and western plains of NSW.

The decision on legally closing non-paying lines was a political decision, not one made by even the most senior levels of the railway organisation. The railway was an instrument of government. Staged closure of some lines, eg, Molong to Dubbo in two sections, and Moree to Inverell in three sections, suggests that the decisions were not made arbitrarily.

Opportunistic closing of lines was common between the late 1940s and early 1990s. Taking advantage of damaged track, the organisation argued that the cost of repairs was not economically justified given the high costs and low returns generated by operating the line. Appearing as a decision beyond its managerial control, the organisation could avoid being seen to make hard and politically unpopular decisions to close otherwise uneconomic lines.

Loss of regional railway transport service infrastructure started in a major way after January 1984 when the length of line open for rail traffic began to be significantly reduced.

Closure of Railway Stations in NSW: 1855 – 2003

Introduction

While the length of railway line open for train traffic is one indicator of produced economic capital, public access to the resource is also vital. Otherwise the line merely passes from one outside locale, through a community, to another outside locale, without the community being able to access the transportational value of the railway.

This section establishes the historic scale and pattern of railway station closure across NSW, by identifying, quantifying and analysing station opening and closure between 1855 and 2003. The number of stations is a quantitative measurement that indicates change, both growth and decline, in the number of access points for passengers to the produced economic capital resource of the NSW government railway network.

Existing Knowledge

There has been no known study of the historical geography of railway station closure in NSW.

Research Methods & Analysis

A **station** is taken to be the place along a railway line at which trains stop (*Macquarie Dictionary* 1991) so passengers or goods can be loaded or unloaded. The station provides an entry point to the railway, place where customers buy tickets, get information and catch trains.

To measure the number of publicly available access points along the NSW government railway network, the opening and closing dates for stations were collated from Forsyth (1993; 1996) supplemented by scanning *ARHS Bulletin* (1996 – 2003) and *Railway Digest* (1996 – 2003), and entered into a Microsoft Excel spreadsheet for analysis. Stations closed as part of track deviation, eg, Helensburgh, relocation, eg, St. Leonards, or on private railways, eg, Newnes, were not included. Where an opening or closing date could not be established, the gap was treated as missing data. Being non-continuous, data was displayed in vertical bar graph form, with date on the independent variable x-axis, and the number of stations opened and closed on the dependant variable y-axis, to which trend lines were fitted using the excel function (Figure 2).

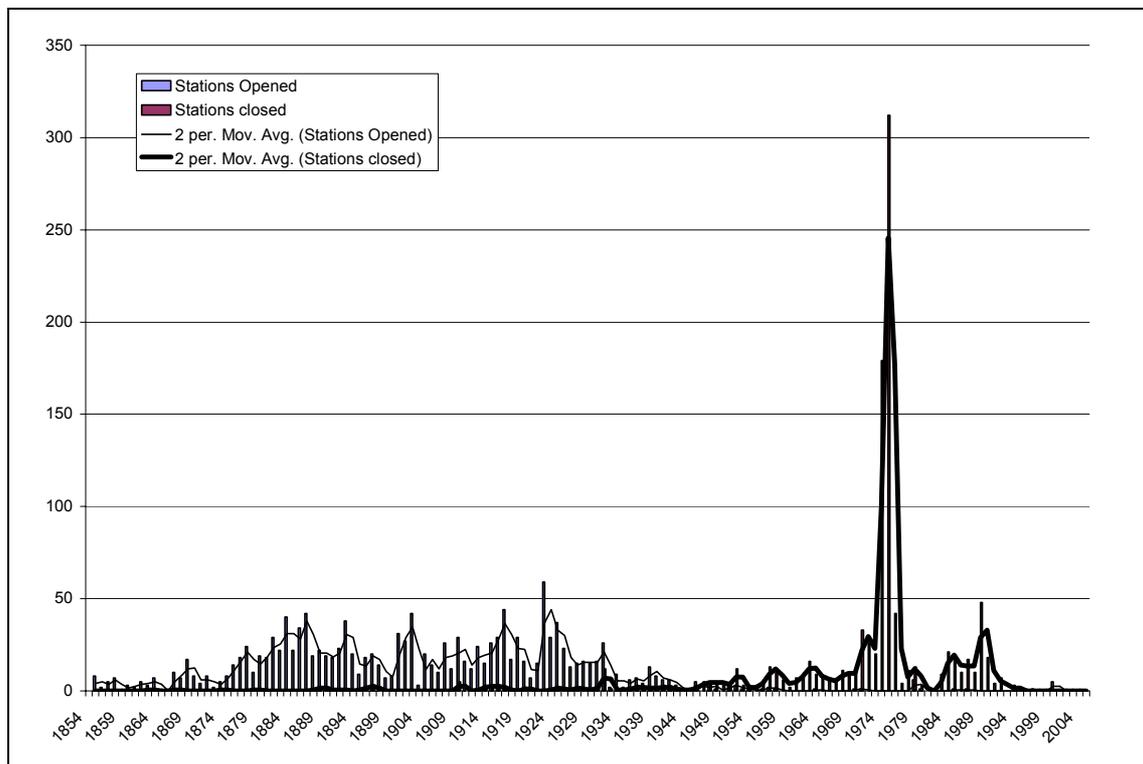


Figure 2

Analysis of the data after it had been expressed in graphical form (Figure 2), revealed two discrete and asymmetric eras. The first era (1855 – 1932) was characterised by increasing the number of access points to the network. The second era (1932 – 2003) was characterised by decreasing the number of access points to the network.

Station Closure: 1855 – 2003

By 2003 there had been 1,450 public access stations opened along the NSW government railway network, of these 1,100 had been closed, 76% of the total station population. The temporal relationship between station opening and closure was very asymmetric (Figure 2). Stations were opened gradually along new lines as the network expanded. More were opened across the plateau after 1932. A few were opened during periods of line closure. While the length of lines had ceased to be extended, some stations were being added to existing lines, thus increasing the number of access points to the then existing network.

Stations were closed both along lines that were to remain open and along lines that were being closed. Over the three year period from 1974 to 1976, 532 stations were closed, 48% of all station closures. The geographic pattern of station closures is shown by comparing the stations open as at 1969 and 1977 (Maps 1 and 2 of the summary report).

Of closed stations most were in regional areas (Table 1).

Table 1 Stations closed 1855 to 2003 by geographic location.

1855 – 2003	Number of Closures	%
In Metropolitan areas	86	8 %
In Regional areas	1,014	92%
Totals	1,100	100%

Conclusion

By studying the geographic history of the railway stations of NSW, this section has audited changes through time in public passenger access to the produced economic capital resource of the infrastructure of railway stations. Over the 148 year long 1855 – 2003 period government provision of access points to the railway network has varied significantly. Provision of stations falls into two clearly differentiated eras: 1855 – 1932 and 1932 – 2003. The eras do not seem to interrelate with those of closing lines. Provision of stations to provide access to the network included opening new stations along both new and existing lines, and closure both along lines that were to remain open and along lines that were being closed.

Progression from era to era indicated changes in government policy towards the provision of regional access points for potential train passengers. Of the number of public stations closed in NSW, 92% were in regional areas.

Loss of passenger access to regional railway transport service infrastructure started in a major way in 1974 when the number of stations began to be significantly

reduced. The 1974 – 1976 peak period of station closures preceded the 1984 – 1994 peak era of line closures by about a decade, suggesting that passenger access points declined in advance of goods traffic. Many ‘stations’ remained open exclusively for goods traffic, notably grain, long after they had been closed for passenger traffic.

The reason for closure has overwhelmingly been economics (PTC 1974). Providing regional passenger railway service has always been a non-paying proposition, but for many years was provided as a public service by subsidisation from other government revenue. From the earliest days of operation, railway management in NSW realised that “*in countries such as New South Wales, where the population is comparatively small, and scattered over a vast territory, we must look for an increase in railway revenue chiefly to the development of the goods traffic*” (Annual Report 1846-1864). One hundred and ten years later, under the banner of ‘Rationalisation of Services’ stations that could not “*be justified on the basis of economics or social need*” were closed, thereby “*reducing the cost of staffing and maintaining many country stations*” (Annual Report 1974).

Overall Conclusion on Line and Station Closure

The reason for both line and station closure was the decreased willingness of state government to subsidise the cost of providing regional railway services.

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Appendix 4: What Happened to the Passengers? Further issues and findings

The value and reliability of train patronage projections – a comment

During the course of the research project for ‘A Future for Regional Passenger Trains in New South Wales’, a belief that passenger patronage levels for regional services were on a continuing steady decline became apparent. This view was expressed by people in the rail industry and transport policy making. The project summary report argues that this view may be misleading.

In addition to the obvious fact that patronage has fallen over the last 40 years, some published analyses and projections of patronage may have contributed to this idea. In the course of the research, many publications, including Annual Reports which cite coach and air competition (see ‘A survey of regional air and coach fares’ below), indicate causes of decline which are apparently persistent and beyond the control of rail operators. This may help to maintain the impression of inevitability. One report (Mitchell and Sidebottom, 2002), which may lie behind these popular interpretations, uses extensive data sets and complex statistical techniques to project future patronage levels. This type of work may underly the image of inevitable decline. However, it is worth examining the basis of the projections.

Mitchell and Sidebottom project trends in patronage based on figures for 1998, 1999 and 2000. These were years of declining patronage for CountryLink, which as the Summary Report shows, has experienced growth at times during the last 15 years. The projections depend heavily on ‘gravity models’ which use population size as the basic determinant of demand. Regional population decline is said to reduce demand. While this is reasonable, many regional areas will continue to grow rapidly, generating strong demand long distances from Sydney. The projections also assume that rail and coach travel are inherently less attractive than car and air without taking note of possible changes in relative costs including the price of petrol. Nor is any account taken of possibilities for persistence and change in cultural practices related to travel.

Perhaps the greatest shortcoming of these projections, which it should be noted is beyond the scope of the projections themselves, is that they may fuel the idea that continuing decline is inevitable without accounting for explanations of decline. As the Summary Report argued, there is evidence that factors related to service quality, within the control of rail operators, may have affected patronage trends. The Summary report notes that patronage levels have risen after service improvements. (Mitchell and Sidebottom (p.193) show Queensland Rail long distance passenger journeys increasing from 416 000 in 1998 (the year of the introduction of the Rockhampton tilt train service) to 582 000 in 2000.) Users of projections should take account of these issues.

Some survey findings

The effect of unreliability and inconvenience in services became apparent in the focus groups.

When a train broke down 'one woman was really concerned - said I hope we get there'. Another commented: 'they just stopped using the train because you couldn't guarantee ... so people stopped using it because, like you were saying [other group member] it's noisy because it's not serviced properly, it's old as whatever ...'

Average annual timekeeping performance has improved but there can still be wide variation from week to week. CountryLink Weekly On-Time Running July 2002 - August 2004, downloaded from www.countrylink.nsw.gov.au/news/ indicates that on-time running can be as high as 92 per cent of services on-time (or less than 10 minutes late) but it can also be as low as 47 per cent on-time.

Timetable issues were raised in the focus groups and interviews as affecting service levels and hence, potentially, patronage. Timetabling is inherently problematic because of the small number of services operated, their slow speed keeping frequency low and people's needs in a wide variety of situations. Inter-regional travel can be important but timetables have to suit the timing of long and infrequent runs for the trains and servicing requirements. 'I use the train because the places I need to go to like Newcastle and the Central Coast - it's not easy to get to by plane even if I can afford it.'

As mentioned in the Summary Report, day return services were highly valued. Such services have been more readily available in the past, such as the Riverina XPT to Sydney returning on the Melbourne express. For a time during 1994 it was possible to spend an afternoon and part of an evening in Sydney before returning on the Melbourne XPT (source: Railpage website). Orange and Bathurst have both lost day return services, albeit slow ones. Canberra has fewer since recent timetable changes. Lack of day return services can mean considerable inconvenience and expense for travellers. 'If I have to go to Sydney or ..., I have to pay two nights accommodation.'

Some focus group participants pointed to the late scheduled Sydney arrival times of some services, notably the Dubbo XPT. 'I'd like to get to Sydney before dark.' The recently retarded Melbourne-Sydney XPT is now a candidate for this criticism with its almost 8pm arrival time. 'People say they won't catch the XPT to Sydney because it's such a terrible place at that time of night.' This can be a particular concern for parents and the elderly.

For further discussion on CountryLink and timetabling, see Proctor, D. (1994) 'Towards a Better CountryLink', *Railway Digest*, 32 (7): 44.

'Dependency' and timetables

'Dependency' is a term sometimes used to describe the relationship between metropolitan and regional Australia, in which the interests of regional people seem to be given lower priority. Dependency can be applied to the operation and management of Australia's railways. It becomes apparent when we look at timetables which appear to serve metropolitan people better than the regions.

In the nineteenth century, the colonial (state) governments used the development of railways to exert control over the regions from the capitals. The government railways had their headquarters in the capitals and the administrative structures of the railway

organisations were hierarchical and controlled from the capitals (to a lesser extent in Queensland than in the other states). The railways facilitate trade in a way which would benefit the metropolitan cities while the resources of the regions were exploited. McKillop (1999) indicates that in the nineteenth century the control exercised by the New South Wales Government extended to the use of differential freight rates in order to ensure that regional industry could not compete with industry located in Sydney.

These conditions have changed of course, but the organisation of timetables can still appear to favour the metropolitan based traveller. The Ministry of Transport has appointed regional coordinators who work on these issues, but the basic administrative structure, which may be heavily underpinned by equipment servicing and efficiency requirements (as perceived and administered from Sydney) is metropolitan-focused, or 'urbocentric'.

Regional people perceive differences in government responses to issues in metropolitan Sydney: 'they're spending the money in the metropolitan area', as one focus group participant said. Another saw Sydney people having large sums of money spent on subsidising their transport. 'Why should we be subsidising city people? [their transport subsidy and concessions] We should have the same.' And it was pointed out that 'Sydney people use country trains too', recognising a mutuality of interests.

Some phone survey findings regarding timetables

In addition to the table presented in the Summary Report indicating that length of journey time and reliability are significant factors for many people, there is evidence from the phone survey that timetabling is important and that improvements to it may foster higher patronage. The relevant questions and frequencies of response are presented below (Tables 1 and 2).

Table 1 'Being able to leave when I want to is important when I make a long trip.'

Value Label	Value	Frequency	Percent	Valid Percent	Cumulative Percent
strongly agree	1	110	36.3	36.3	36.3
agree	2	160	52.8	52.8	89.1
no opinion	3	9	3.0	3.0	92.1
disagree	4	23	7.6	7.6	99.7
strongly disagree	5	1	.3	.3	100.0
		-----	-----	-----	
	Total	303	100.0	100.0	
Valid cases	303	Missing cases	0		

Table 2 'I would use trains more often if they left at more convenient times.'

Value Label	Value	Frequency	Percent	Valid Percent	Cumulative Percent
strongly agree	1	71	23.4	23.6	23.6
agree	2	108	35.6	35.9	59.5
no opinion	3	41	13.5	13.6	73.1
disagree	4	74	24.4	24.6	97.7
strongly disagree	5	7	2.3	2.3	100.0
	0	2	.7	Missing	
		-----	-----	-----	
	Total	303	100.0	100.0	
Valid cases	301	Missing cases	2		

A survey of regional air, rail and coach fares

The table below presents the findings of a survey of air, rail and coach fares for selected journeys. It is presented to facilitate comparison but is not intended to be necessarily representative of the range of fares offered by any operator or all operators. It applies the CountryLink discount formula (40% for 7 or more days advance purchase; 50% for 14 or more days advance purchase) but does not include any of CountryLink's concession fares. All fares shown are the cheapest available for the day stated as indicated by the internet site regardless of schedules.

Wagga Wagga to Sydney internet inquiry on 6/09/2004 seeking cheapest one-way fare with no concessions for	Qantas	Rex	CountryLink	Fearnles Coaches	McCafferty's Coaches
Tuesday 7 September 2004	89	143	78	48	55
Friday 10 September 2004	241	173	78	48	55
Thursday 16 September 2004	89	143	47	48	55
Sunday 26 September 2004	89	89	40	48	55
Wednesday 6 October 2004	89	89	40	48	55
Saturday 6 November 2004	140	99	40	48	55
Monday 6 December 2004	140	99	40	48	55

Wagga Wagga to Melbourne internet inquiry on 8 September 2004 for	Qantas	Rex	CountryLink	McCafferty's Coaches
Thursday 9 September	346	99	78	55
Friday 10 September	494	99	78	55
Thursday 16 September	346	99	47	55
Sunday 26 September	279	187	40	55
Wednesday 6 October	184	99	40	55
Saturday 6 November	162	99	40	55
Monday 6 December	162	99	40	55

Sydney to Melbourne internet inquiry on 15 September 2004 for	Qantas	Virgin	CountryLink	McCafferty's Coaches
Thursday 16 September	49	109	116	64
Friday 17 September	49	109	116	64
Sunday 26 September	69	109	68	64
Wednesday 6 October	49	89	58	64
Saturday 6 November	49	69	58	64
Monday 6 December	69	69	58	64

Dubbo to Sydney internet inquiry on 15 September 2004 for	Qantas	Rex	CountryLink	McCafferty's Coaches
Thursday 16 September	89	130	69	106
Friday 17 September	284	268	69	106
Sunday 26 September	139	138	41	106
Wednesday 6 October	89	89	34	106
Saturday 6 November	128	99	34	106
Monday 6 December	128	99	34	106

Dubbo to Sydney internet inquiry on 27
September 2004 for

Tuesday 28 September	180	89	69
Wednesday 6 October	89	89	41
Saturday 6 November	128	99	34
Monday 6 December	128	99	34

Armidale to Sydney internet inquiry on
27 September 2004 for

Tuesday 28 September	99	98	84
Wednesday 6 October	99	98	50
Saturday 6 November	180	99	42
Monday 6 December	169	99	42

Some telephone survey findings with regard to travel behaviour, purposes and reasons

When asked the travel mode of their most recent long trip, respondents displayed a pattern which broadly reflects current modal shares (Table 3), with holidays and family visits being the most frequent purposes indicated (Table 4). (Part of the survey was conducted during school and university holidays.) Crosstabulation shows that no train trips were made for work purposes. All train trips were either holiday or family visits.

Table 3 Mode of recent long trip

Value Label	Value	Frequency	Percent	Valid Percent	Cumulative Percent
car	1	200	66.0	69.9	69.9
plane	2	39	12.9	13.6	83.6
train	3	26	8.6	9.1	92.7
coach/train	4	10	3.3	3.5	96.2
other coach	5	11	3.6	3.8	100.0
.	.	11	3.6	Missing	
0	0	6	2.0	Missing	
		-----	-----	-----	
Total		303	100.0	100.0	

Valid cases 286

Missing cases 17 (those who indicated no recent trips)

Table 4 Purpose of recent long trip

Value Label	Value	Frequency	Percent	Valid Percent	Cumulative Percent
work	1	33	10.9	11.9	11.9
holiday	2	120	39.6	43.2	55.0
medical	3	19	6.3	6.8	61.9
visit relatives	4	106	35.0	38.1	100.0
.	.	19	6.3	Missing	
0	0	6	2.0	Missing	
		-----	-----	-----	
Total		303	100.0	100.0	
Valid cases	278	Missing cases	25		

A very large majority (83 per cent) indicated that they did not inquire about alternative ways of travelling before making their trip. This suggests that convenience and familiarity may be significant factors in travel behaviour. This view is reinforced by the dominance of convenience and familiarity as decision factors, both being much more commonly selected than cost (Table 6).

Table 5 'Before the trip, did you inquire about using another mode of travel eg plane or train rather than car?'

Value Label	Value	Frequency	Percent	Valid Percent	Cumulative Percent
yes	1	51	16.8	17.2	17.2
no	2	246	81.2	82.8	100.0
0	0	6	2.0	Missing	
		-----	-----	-----	
Total		303	100.0	100.0	
Valid cases	297	Missing cases	6		

Table 6 'Did you make your decision primarily on the basis of:

Value Label	Value	Frequency	Percent	Valid Percent	Cumulative Percent
cost?	1	31	10.2	11.1	11.1
convenience?	2	161	53.1	57.7	68.8
travel time?	3	21	6.9	7.5	76.3
travel comfort?	4	19	6.3	6.8	83.2
best known?'	5	47	15.5	16.8	100.0
.	.	17	5.6	Missing	
0	0	7	2.3	Missing	
		-----	-----	-----	
Total		303	100.0	100.0	
Valid cases	279	Missing cases	24		

Air travel appears to be attractive to more people than the other modes, with train and car travel about equally popular and coach travel the least popular (Tables 7 to 10).

Table 7 'I usually enjoy travelling by plane.'

Value Label	Value	Frequency	Percent	Valid Percent	Cumulative Percent
strongly agree	1	107	35.3	35.3	35.3
agree	2	137	45.2	45.2	80.5
no opinion	3	13	4.3	4.3	84.8
disagree	4	34	11.2	11.2	96.0
strongly disagree	5	12	4.0	4.0	100.0
		-----	-----	-----	
	Total	303	100.0	100.0	
Valid cases	303	Missing cases	0		

Table 8 'I usually enjoy long train trips.'

Value Label	Value	Frequency	Percent	Valid Percent	Cumulative Percent
strongly agree	1	27	8.9	8.9	8.9
agree	2	130	42.9	42.9	51.8
no opinion	3	38	12.5	12.5	64.4
disagree	4	78	25.7	25.7	90.1
strongly disagree	5	30	9.9	9.9	100.0
		-----	-----	-----	
	Total	303	100.0	100.0	
Valid cases	303	Missing cases	0		

Table 9 'I usually enjoy long car trips.'

Value Label	Value	Frequency	Percent	Valid Percent	Cumulative Percent
strongly agree	1	33	10.9	10.9	10.9
agree	2	119	39.3	39.3	50.2
no opinion	3	11	3.6	3.6	53.8
disagree	4	108	35.6	35.6	89.4
strongly disagree	5	32	10.6	10.6	100.0
		-----	-----	-----	
	Total	303	100.0	100.0	
Valid cases	303	Missing cases	0		

Table 10 'I usually enjoy long coach trips.'

Value Label	Value	Frequency	Percent	Valid Percent	Cumulative Percent
strongly agree	1	10	3.3	3.3	3.3
agree	2	60	19.8	19.8	23.1
no opinion	3	24	7.9	7.9	31.0
disagree	4	126	41.6	41.6	72.6
strongly disagree	5	83	27.4	27.4	100.0
		-----	-----	-----	
	Total	303	100.0	100.0	
Valid cases	303	Missing cases	0		

References and further reading

- Gray, I. (2004) *Governance and Railways: Implications for Regional Development*, paper presented at the Workshop on Participation and Governance in Regional Development, Hamilton, 30 June to 2 July, 2004.
- McKillop, B. (1999) 'Progress in Rail Reform: Structures for the 21st Century, the Regional Development Imperative', Submission to the Productivity Commission Report on Progress in Rail Reform.
- Mitchell, D. and Sidebottom, A. (2002) *Regional Public Transport in Australia: Long-Distance Services, Trends and Projections*, Working Paper 51, Bureau of Transport and Regional Economics, Canberra.

Appendix 5: What Has Prevented Improvement? Further reading on the issues

Much has been written about the inadequacy of the railway infrastructure in New South Wales. The material ranges from government and other inquiries and assessments to commentary on the detrimental effects of inadequate and outdated infrastructure. Some policy statements and sources of information and opinion include:

Anderson, J. (2002) *Response of the Federal Government to the House of Representatives Standing Committee on Communications, Transport and the Arts Report 'Back on Track'*, Department of Transport and Regional Services, Canberra.

Australasian Railway Association (2004) *Infrastructure Investment Policy: Investing for the Future*, Australasian Railway Association Inc., Canberra.

Department of Transport and Regional Services (2001) *Government Response to House of Representatives Standing Committee on Primary Industries and Regional Services: Report of the Inquiry into Infrastructure and the Development of Australia's Regional Areas 'Time Running Out: Shaping Regional Australia's Future'*, Parliament House, Canberra.

Engineers Australia (2003) *2003 NSW Infrastructure Report Card*, Engineers Australia, Canberra.

<http://www.infrastructurereportcard.org.au/downloads/2003ReportCard.pdf>

Gow, N. (2002) 'The Trouble with Fast Rail', *Railway Digest*, 40 (9): 24-28.

House of Representatives Standing Committee on Communications, Transport and Microeconomic Reform (1998) *Tracking Australia: An Inquiry into the Role of Rail in the National Transport Network*, Parliament of the Commonwealth of Australia, Canberra.

Hoyle, J. (1996a) 'Track Australia: A Review of Costs and Benefits', *Railway Digest*, 34 (4): 18-19.

Laird, P., Newman, P., Bachels, M. and Kenworthy, J. (2001) *Back on Track: Rethinking Transport Policy in Australia and New Zealand*, University of New South Wales Press, Sydney.

The Railway Technical Society of Australia website, particularly its submissions page (<http://www.rtsa.com.au/submissions.shtml>) contains useful information and analysis.

Appendix 6: Opportunities for Regional Passenger Rail in New South Wales: Possibilities and further reading

Travel demand management

New South Wales has not shown interest in demand management – see Hoyle, J. (2003) 'NSW Fails to Bid for National Travel Behaviour Change Project', *Railway Digest*, 41 (1): 10, despite increasing use of public transport being a stated objective of the Government's initiative: *Action for Transport 2010: an integrated transport plan for Sydney*.

The scientific basis and policy field of transport demand management are well established. The following publications discuss various related issues.

Bamberg, S., Rolfe, D. and Weber, C. (2003) 'Does Habitual Car Use Not Lead to More Resistance to Change of Travel Mode?', *Transportation*, 30 (1): 97-108.

The question of the significance of familiarity in transport behaviour is debated. The issue is not so much about whether or not car use is habitual but rather about how practices might change. It is widely accepted that transport behaviour is habitual, meaning that people use their cars more through habit, simply because it is what they usually do, and convenience than conscientious decision each time they leave their home.

Ferguson, E. (2000) *Travel Demand Management and Public Policy*, Ashgate, Aldershot.

A general textbook on all means of demand management.

Garvill, J., Marell, A. and Nordlund, A. (2003) 'Effects of Increased Awareness on Choice of Travel Mode', *Transportation*, 30 (1): 63-79.

Discusses the process of modal choice with a view to soft measures.

Organisation for Economic Cooperation and Development (2004) *Communicating Environmentally Sustainable Transport: The Role of Soft Measures*, Organisation for Economic Cooperation and Development, Paris.

Covers a range of topics related to travel behaviour and soft measures which might influence it.

Some telephone survey findings

The summary report used some telephone survey findings, drawing on a question about feeling a responsibility to use cars less often to diminish congestion and pollution. Further support for the idea that people may be willing to see travel as environmental behaviour, and modify it, is offered from the answers to more questions about cars and their use (Tables 1 and 2). Substantial proportions of respondents indicate willingness to reduce car use for regional travel. When asked about car purchase intentions, three quarters of respondents indicated no immediate interest.

Table 1 'I have decided that in future I'll try to use the car less often for long trips.'

Value Label	Value	Frequency	Percent	Valid Percent	Cumulative Percent
strongly agree	1	26	8.6	8.6	8.6
agree	2	96	31.7	31.8	40.4
no opinion	3	31	10.2	10.3	50.7
disagree	4	132	43.6	43.7	94.4
strongly disagree	5	17	5.6	5.6	100.0
	0	1	.3	Missing	
		-----	-----	-----	
	Total	303	100.0	100.0	
Valid cases	302	Missing cases	1		

Table 2 'I Intend to buy a new car as soon as I can afford one.'

Value Label	Value	Frequency	Percent	Valid Percent	Cumulative Percent
strongly agree	1	30	9.9	9.9	9.9
agree	2	56	18.5	18.5	28.5
no opinion	3	10	3.3	3.3	31.8
disagree	4	129	42.6	42.7	74.5
strongly disagree	5	77	25.4	25.5	100.0
	0	1	.3	Missing	
		-----	-----	-----	
	Total	303	100.0	100.0	
Valid cases	302	Missing cases	1		