MINIMUM AVERAGE WALK / WAIT TIME
TO BUS OR TRAIN

SYDNEY, 1969

MAP 11

ISOPLETHS IN MINUTES ELAPSED BETWEEN
LEAVING AN AVERAGE DWELLING AT A
RANDOM HOUR AND BOARDING A PUBLIC
TRANSPORT VEHICLE

- - - LGA boundaries
- - - Metrop. area

1 0 1 2 3 4 5 6 7

scale: kilometres

	0 min
	5 min
	10 min
	15 min
	20 min
	30 min
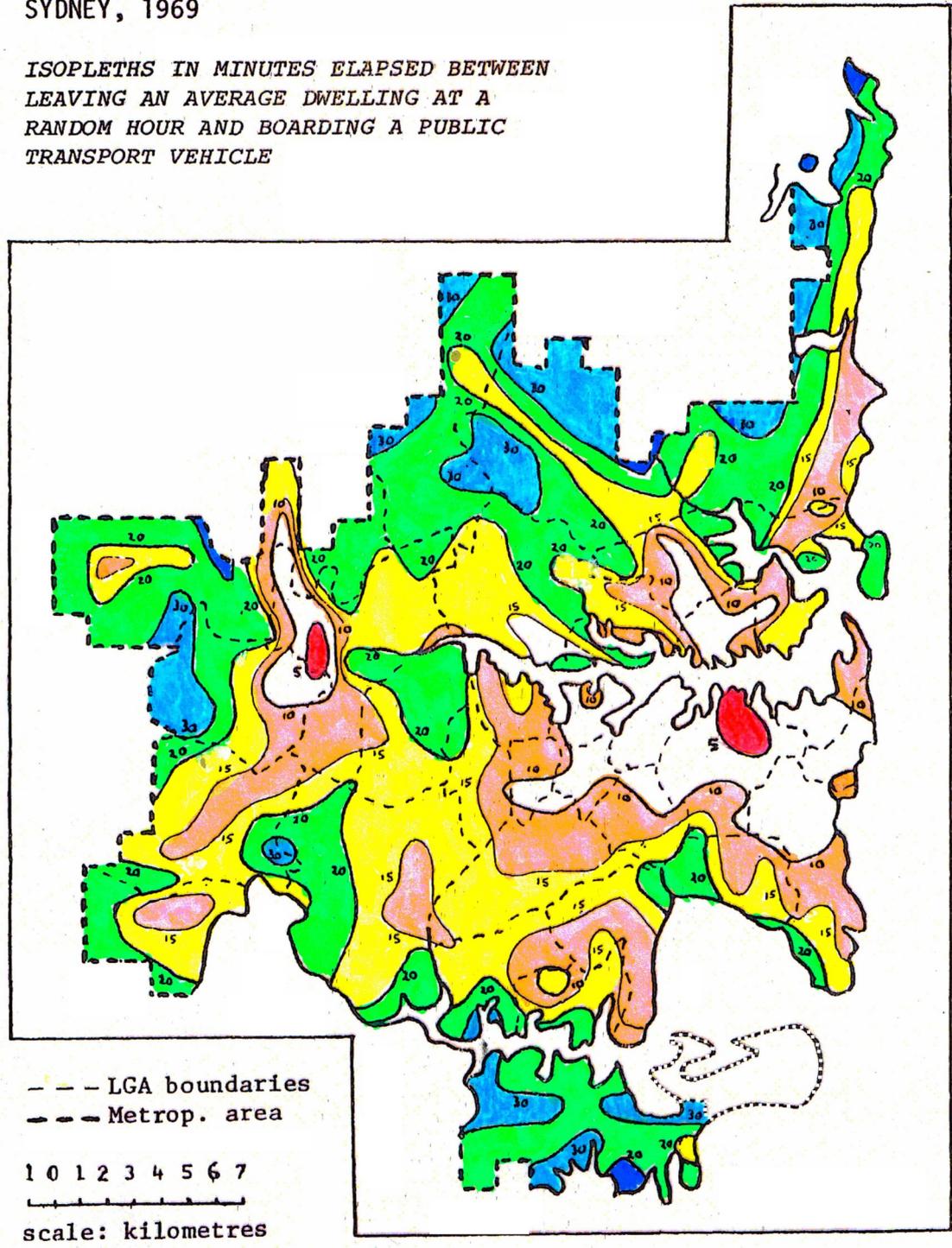
Inside: "How Good was **THAT?**"
More on CR PTTs
Slow and Fast in NZ
Sundays at Central

—Contents—

WHY GO PAST?
Indeed. Why go past Public Transport?

Back in 2003, Michael Costa, the then Transport Minister, opined that "You need a degree in timetable-ology to get around the system [at the moment]". Little did he know that people with such degrees were lurking in the background.

In this issue, Ian Manning takes a look at Public Transport in Sydney in 1969 … part of a project that formed his Ph.D. thesis.

The photo above shows pedestrians emerging from Town Hall station and scurrying past a Ryde-bound bus. Ian's thesis examined the interaction of pedestrians, trains and buses in getting people to work in Sydney.

How good was Sydney public transport fifty years ago?

Ian Manning

Back in 1970 I found myself pursuing a PhD at the Australian National University on the equity of provision of public services in the different suburbs of Sydney. One of the services in question was public transport. I never bothered to publish my researches, but they may have passing interest as a record of public transport services as they were half a century ago.

Such a study required measurement of the quality of service and I therefore searched the literature for relevant measures. The most likely source was the "Transportation Studies" which were then being carried out in all the major Australian cities, though not yet in Sydney.

The Transportation Studies

The idea behind the Transportation Studies was to collect data on urban travel behaviour and to use these data to guide future transport investments. These Studies were subsequently criticised for the simplistic way in which they used the data which they collected to support freeway construction, mostly on alignments already reserved by a previous generation of town planners. Where alignments were suggested which involved demolishing people's houses, political hell broke out and the offending freeways were quietly deleted from the maps. These criticisms are not wholly fair, since a simplified approach was inevitable, given the limitations of the computers of the day. Whereas today conscientious urban planners will assess a wide variety of alternative locational patterns and transport connections even if they eventually succumb to the preferences of the roads lobby, developers and other political groups. Their equivalents fifty years ago were very restricted in the extent to which they could analyse current data and explore future options.

The Transportation Studies divided each city into zones and used the fledgling computers of the day to calculate how many trips were made from each zone to each other zone. It was assumed that trips between any two zones would increase with the number of potential trip origins in the first zone (say houses) and with the number of potential destinations (say workplaces) in the second, but would diminish with the distance between the two zones, measured in some combination of time and cost. This 'gravity' model was 'calibrated' from the collected data and used to project changes in 'travel demand' as the cities followed their growth trends.

Though the Transportation Studies were primarily road-building exercises, they acknowledged the

MAP 7

PEAK PERIOD RAIL ACCESSIBILITY INDEX (Melbourne Formula) SYDNEY, 1969

- - - LGA boundaries
- - - Metrop. area

1 0 1 2 3 4 5 6 7
scale: kilometres

▨ Index value over 7

▨ Index value 2 and less than 7

All other areas - index value less than 2.

PEAK PERIOD BUS ROUTE ACCESSIBILITY INDEX (Melbourne Formula) SYDNEY, 1969   MAP 8

▨ Index value over 20

☐ Index value 10 and less than 20

All other areas - index value less than 10.

- - - LGA boundaries
- - - Metrop. area

1 0 1 2 3 4 5 6 7

existence of public transport as a lower-cost, slower alternative to motoring. Each zone-to-zone travel estimate was subjected to a modal split calculation, which divided travel demand between motoring and public transport depending mainly on a cost/speed comparison. It was expected that motoring would become more affordable and that, provided road construction kept pace with travel demand, people would be able to save precious time by switching from public transport to driving – hence the case for freeway building. The data were used to argue that people were happy to pay for speed and that new freeways would generate travel time savings worth millions of dollars.

The Fouvy indices of public transport quality

Despite this underlying agenda, the Melbourne Transportation Study attempted to go beyond the assumption that public transport is always inferior to motoring and to investigate the response of modal split to the quality of public transport services in each zone. Under the guidance of a Tramways Board

engineer, C.L.Fouvy, the Study constructed two indices of public transport service, one for the trains and the other for trams and buses. The indices basically reflected the distance from home to public transport and the frequency of public transport service. Fouvy defended the indices as follows: 'Convenience of service is assumed greater for two routes [or two rail stations] each with two vehicles an hour, than for one route with four vehicles an hour, since wider areas are served. The use of the square root of the service frequency places more emphasis on the number of routes serving the area than on the service frequency of an individual route. The number of routes passing through a district tends to increase in proportion to the size of the district, assuming equal service levels; dividing by the square root of the area provides compensation for unequal district size.'

Fouvy's rail and tram/bus indices were calculated for the peak period and used in a regression analysis to explain the observed numbers of train, tram/bus and car trips originating and terminating in each Melbourne

Transportation Study district. Other variables included the number of resident workers, residents' cars, students and jobs. In many districts the tram/bus index was significantly associated with high tram/bus patronage, and was also negatively associated with rail patronage. The rail index was not particularly successful as a predictor of rail patronage, and neither index was of much use in the prediction of car travel. The findings were not fully analysed – for example, it would have been useful to know whether there was a relationship between the indices and car ownership rates. A finding that low car ownership, high public transport quality and high public transport usage characterise high-density suburbs could have led to a conclusion that investment in increasing urban densities would be better than investment in freeways.

It remained for me to apply the Fouvy indices to Sydney. By 1970 there were no trams in Sydney, so the tram/bus index became a pure bus index. On the other hand, Sydney had ferries which provided express service from harbourside suburbs to Circular Quay.

PEAK PERIOD AVERAGE BUS WALK / WAIT TIME [LIMITED FAST WALKING]
SYDNEY, 1969

MAP 9

ISOPLETHS IN MINUTES ELAPSED BETWEEN LEAVING AN AVERAGE DWELLING AT A RANDOM HOUR AND BOARDING A BUS IN THE SAME GRID SQUARE

– – – LGA boundaries
– · – Metrop. area

1 0 1 2 3 4 5 6 7
scale: kilometres
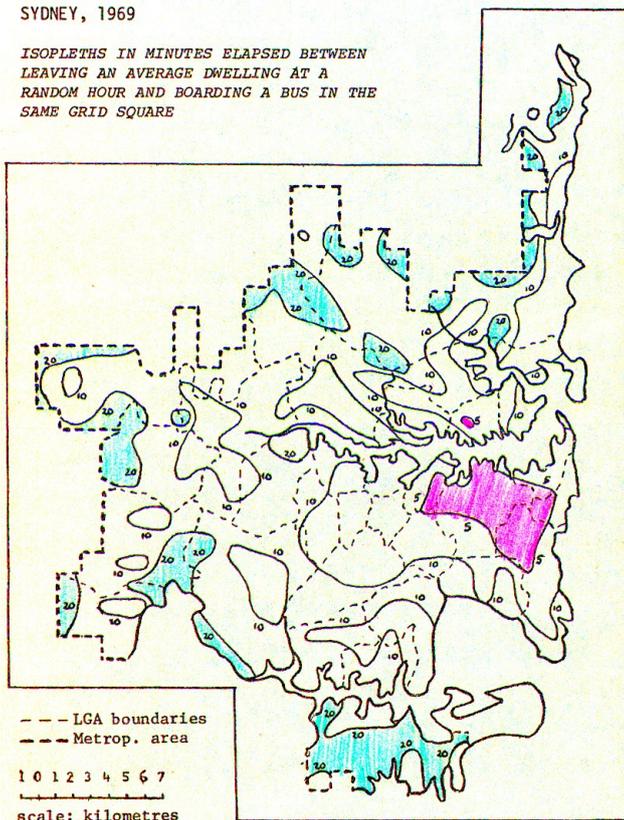
ALL-DAY AVERAGE RAIL WALK (BUS)/WAIT TIME
SYDNEY, 1969

MAP 10

ISOPLETHS IN MINUTES ELAPSED BETWEEN LEAVING AN AVERAGE DWELLING AT A RANDOM HOUR AND CATCHING A TRAIN

– – – LGA boundaries
– · – Metrop. area

1 0 1 2 3 4 5 6 7
scale: kilometres
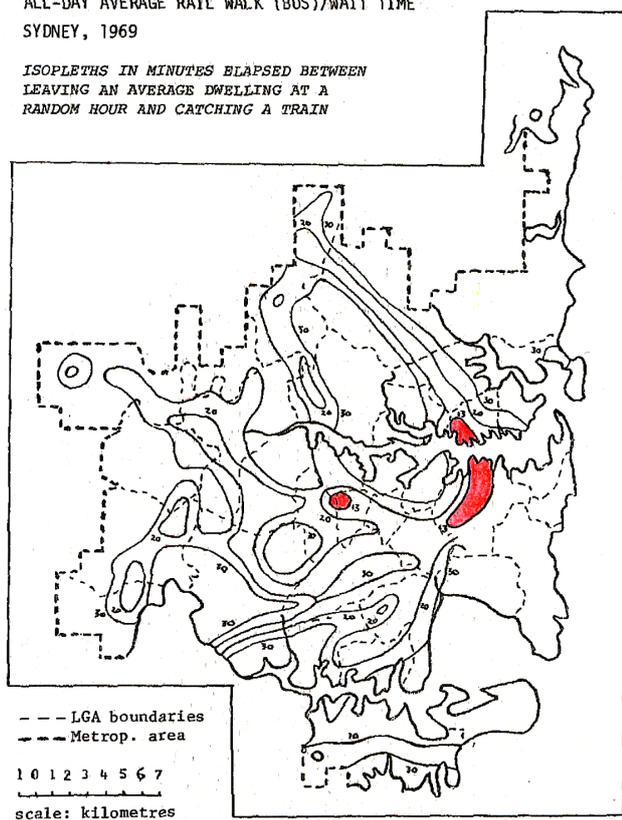
These I treated as akin to rail services. Secondly, *in lieu* of the Melbourne Transportation Study districts, I divided Sydney into 408 rectangular zones defined in terms of the map reference grid employed in the sixth edition of the UBD Sydney Street Directory. Sydney was then smaller than it is now and my calculations did not extend beyond Loftus, Hoxton Park, St Marys, Kellyville and Berowra. Railway stations and ferry wharves were readily allocated to Zones and the frequency of service at each station, both between 7 am and 9 am and throughout the day on weekdays was readily obtained from the timetables. Route and timetable information was also readily available for bus services operated by the Department of Government Transport, while the equivalent information for private bus routes was publicly available in the Rosebery office of the Department of Motor Transport, where it was kept in files of Gestetner copies.

Not surprisingly, the rail/ferry index strongly reflected the location of stations and wharves. According to the index, the best services were available in the CBD, in the inner North Shore and in the then Municipality of Marrickville, plus isolated spots with unusually frequent train services – Gordon, Hurstville, Burwood, Strathfield and Parramatta. On the other hand, infrequent services resulted in low ratings for stations at the limits of the suburban area, including Berowra, Quakers Hill,

Glenfield and Loftus (Map 7, lower left, page 3). The map shows local government boundaries as they were in 1970.

The map of the bus index was a little more interesting. The best served areas were south of the Harbour, all the way from Ashfield to Bondi and Randwick. Elsewhere there were pockets of high service, largely in Zones where bus routes were radiating out from a railway station (Hurstville, Bankstown, Strathfield/Burwood, Auburn, Parramatta and Blacktown). Services on the inner North Shore were not as abundant as to the south of the Harbour, and were quite sparse on the Outer North Shore, in Warringah north of Dee Why, in Sutherland Shire and in swathes of the Western suburbs. There were also service gaps along the East Hills railway line, perhaps because this was a relatively late insertion into the public transport network and bus services had not developed to interchange with its stations (Map 8, lower right, page 3).

A walk/wait index for rail/ferry services

These Fouvy indices are weighted combinations of two measures: the accessibility of stations, wharves and bus stops from dwellings in their district and the frequency of service at those stations, wharves and stops.

I decided that the numbers would be easier to understand if I separated the two components; first, the average

distance from dwellings to the nearest station or stop and second, the frequency of service once one reached that station or stop. I began with the trains and ferries. Computing power has now increased to the point where it is simple to calculate the distance from each dwelling in Sydney to the nearest wharf or station, but the IBM 360/50 which was the height of computing power in 1970 fell way short of the needed capacity so I resorted to approximations. I noted the number of stations and ferry wharves in each map zone, and if there were none, in the zone with the nearest station. With the aid of various assumptions and the application of geometrical probability, I estimated the most probable average distance from dwellings located in each zone to the nearest station. On Zones with a single railway station the most probable average distance was a little over a kilometre, falling to around 0.8 kilometres if there were two stations. At an assumed (and perhaps fairly brisk) walking speed of 5 kmph this translated into average walking time of 13 minutes for a single-station Zone and less than 10 minutes if there were two stations. Where the walking distance was over 1.1 kms (in other words, when there was no station or wharf in the zone), I assumed that the station would be accessed by bus at a time penalty ranging upwards from 15 minutes.

By consulting the timetables I then determined the average frequency of

service at each station during the morning peak period (one-way, 7 am to 9 am) and for each weekday as a whole. On some lines there was very little difference between peak and off-peak services while on others (notably the North Shore) the difference was noticeable. Average waiting time was taken as half the typical service interval, though it would usually be less than this thanks to passenger adjustment to the timetable. The purpose of the index was, after all, to assess service quality, hence my underlying assumption that passengers left home ignorant of the timetable.

Map 10 (page 4, bottom right) plots the results. In suburbs along the rail lines the typical walking time to the nearest station was around 13 minutes. This meant that, in order to generate an average walk/wait time of 13 minutes or less, (a) there had to be more than one station per Zone and (b) services had to be very frequent. Such times were restricted to a very select group of locations served by multiple train services – North Sydney, the CBD, Redfern and the environs of Strathfield and Burwood stations. However, residents of suburbs along the main rail lines could expect to be on board within 20 minutes. Up to 30 minutes were required in places like Berowra and Carlingford and Cronulla where the train service was less frequent and also in Manly, with its infrequent ferry service. Beyond this, in large swathes of the metropolitan area, trains were either irrelevant to likely travel patterns, or could only be reached only by bus or car.

A walk/wait index for bus services

In applying this methodology to bus services two main problems arose. First, bus stops are strung out along bus routes at rather more frequent intervals than stations occur on railway lines. This required adjustment of the geometrical probability calculations underlying the average walking time from houses to bus stops. Second, by comparison with rail stations, the frequency of service varies markedly from bus stop to bus stop. Should one assume that the typical bus passenger heads for the nearest stop or for the nearest stop with good service? I started with average walk/wait times at the nearest stop in the morning peak period.

Map 9 (page 4, bottom left) shows that, on average, under the 1969 timetables, one could leave an average dwelling in inner Sydney – anywhere from Leichardt to Randwick – and catch the first bus to come along within 5 minutes, door to bus. In most of the remaining inner and middle suburbs a bus would be passing by within 10 minutes. In the North and North-West, this 10-minute area stretched to Mona Vale via Narrabeen, Frenchs Forest via Chatswood, North Ryde via Lane Cove and to Eastwood and Ermington via Ryde. Significantly, it did not stretch out along the North Shore line. South of the Harbour this pattern of tentacles was replaced by broad areas. The average walk/wait time to a bus was more than 5 but less than 10 minutes from Randwick to Little Bay (but not all the way to La Perouse) and in Botany, Marrickville, Canterbury (but not Wiley Park), Belmore and Concord (but not Rhodes). Further areas where walk/wait times were less than 10 minutes ran from Riverwood through Hurstville and Kogarah to Sans Souci and from Parramatta north to Northmead and south to Villawood. Smaller 10-minute zones lay around Blacktown, Fairfield, Cabramatta and Liverpool stations. Walk/wait times were over 20 minutes in various peripheral locations such as Moorebank and also, strikingly, along the Cronulla railway line.

An alternative to concentrating on the nearest bus stop was to assume that passengers walk to an alternative bus stop with a more frequent service if this reduces their total walk/wait time. Accordingly, for each zone, I calculated average walk/wait times for the bus stop with the best service, and when they were less than those for the nearest bus stop, used them as the

measure of service quality. This alternative measure, calculated for weekdays as a whole, followed a similar pattern to that on Map 9.

Another way to present the data was to assume that a potential passenger has a choice between catching the bus and walking all the way. The longer the walk/wait time, the longer the journeys where it would be sensible to walk all the way rather than walking to a bus stop and waiting there. Map 12 (page 7, bottom left) charts walk/bus break-even distances calculated on an all-day basis (not just the peak period). Despite the differences of calculation, the pattern shown on Map 9 remains. In an area stretching from Lewisham to Bondi and Randwick, a potential passenger would typically find that hopping on a bus resulted in a faster trip than walking all the way even for trips as short as a kilometre. This also applied in a small area in Parramatta. Walk/bus break-even distances of less than 2 km applied on the North Shore and Warringah right up to Mona Vale, along the North Shore line to Lindfield, through Lane Cove to North

Ryde and via Drummoyne to West Ryde. Most of the eastern and mid-western suburbs were within the 2 km area, and there were separate 2-km areas around Hurstville – Kogarah – Sans Souci, Bankstown and extending from Northmead through Parramatta all the way to Cabramatta and Green Valley. Smaller 2 km areas surrounded Liverpool and Blacktown stations. Various peripheral areas such as Avalon and Moorebank show up on the map as having poor bus services, along with the Lane Cove National Park and, once again, Sutherland Shire.

In Sutherland and some other places, the railway did much of the job of the local bus service – just as in Warringah and several other places buses performed the long-distance express runs that elsewhere were served by rail. Map 11 (our cover) puts the two together, providing the average walk/wait times to a bus, train or ferry, whichever is shortest on an all-day basis. Even as early as 1969, this map provided a certain level of comfort to those who were arguing

that the Sydney metropolitan area should have more than one CBD, since the Sydney CBD and the Parramatta CBD shared the honour of five-minute walk/wait times. The inner north shore had good services with arms extending into Warringah and up to Hornsby while the east and inner west also benefited from good public transport. The area of good public transport centred on Parramatta was much more restricted, but even so, services were quite reasonable through to Liverpool and also round Bankstown. Areas with poor services, with walk/wait times of half an hour or more, lay on the edge of the metropolitan area in places like North Turramurra, Smithfield and Woronora. Sutherland Shire resembled Ku Ring Gai, in that the railway provided a spine of relatively frequent service with rather sparse bus supplementation.

Bus route planners operating within a given budget face a trade-off between service frequency and route coverage, which from a passenger point of view reduces to a choice between waiting

MAP 12

WALK / BUS BREAK-EVEN DISTANCES
SYDNEY, 1969

ISOPLETHS IN KILOMETRES

- - - LGA boundaries
- - - Metrop. area

1 0 1 2 3 4 5 6 7
scale: kilometres

MAP 13

BUS ROUTE DENSITIES
SYDNEY, 1969

- - - LGA boundaries
- - - Metrop. area

1 0 1 2 3 4 5 6 7
scale: kilometres

Enclosed areas - over 6 km of bus route Per Zone
shaded area   - in these areas alone peak bus walk/wait times would be improved by the dispersion of routes.
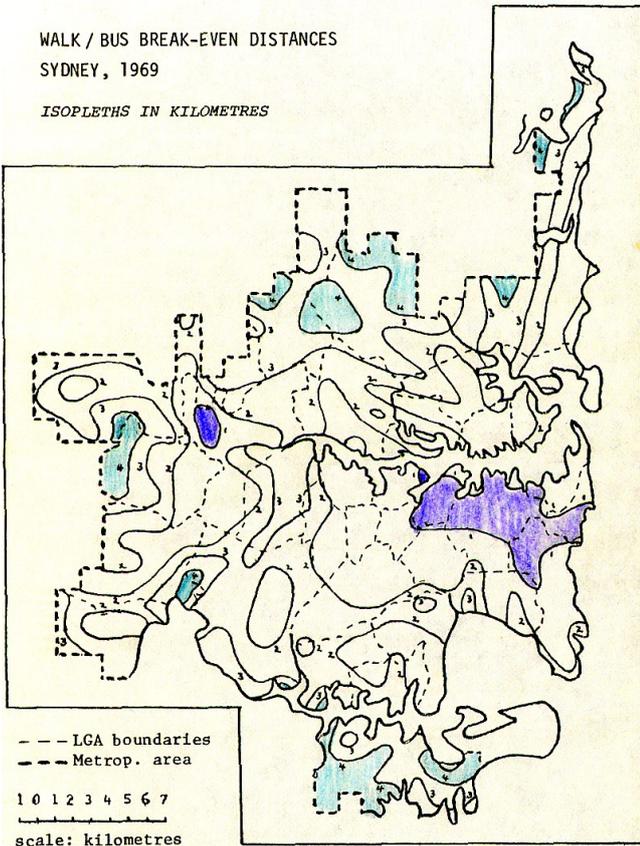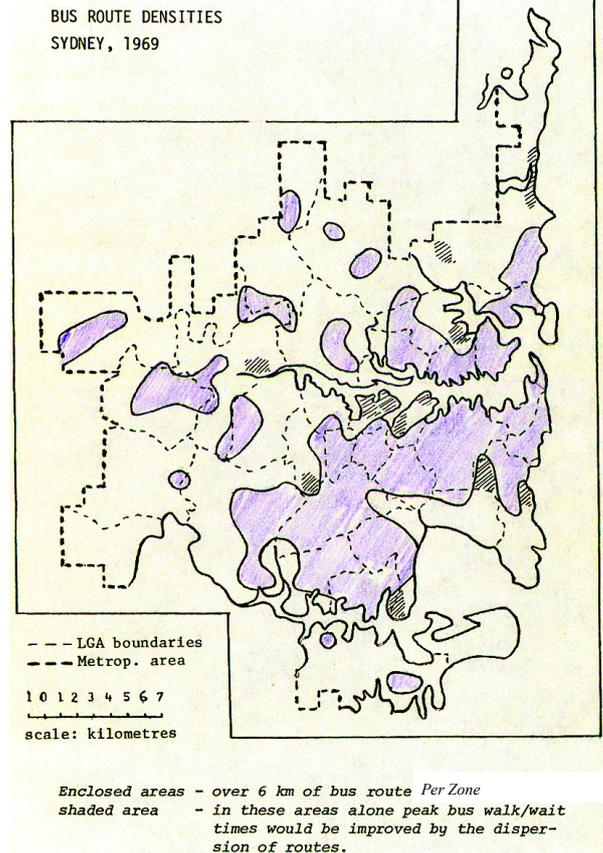
times and walking times. If passengers detest walking and are happy to adjust to the timetable the decision will favour route coverage, while if passengers do not wish to be bound to timetables and especially if they want to change buses during their journey the decision will favour service frequency. High-frequency services also tend to be fast services because they stick to main roads and are not continually dodging through suburban back streets. In the 1920s, when the police were sorting out Sydney's bus routes following the explosion of enterprise by servicemen returned from the First World War, there was an additional reason for favouring route coverage—namely avoiding racing by multiple operators on the one road. In 1969 most of Sydney was well-provided with bus routes, with more than 6 km of bus route per UBD page all the way from Bankstown to Vaucluse (Map 13, page 7, bottom right). (My zones measured approximately 1.6 km square, so this was nearly enough for two routes north-south plus two east-west, at intervals of less than a kilometre.) Route densities were also high on the

Inner North Shore, from Manly to Dee Why, in central Ryde, around Blacktown, in most of Holroyd municipality and in parts of Auburn municipality; they were generally lower in Sutherland, Liverpool, Fairfield, the outer North Shore and outer Warringah. Within the areas of high route density there were no Zones where peak-period walk/wait times would be reduced by further dispersing the bus routes while maintaining bus kilometres constant. However there were a few places where, at least in theory, route dispersion would have reduced walk/wait times. The most significant of these were Concord and Drummoyne, with other candidates in South Coogee, Kensington, Sans Souci, Belfield, Rozelle, Rydalmere, Northbridge and Narrabeen. Some of these suburbs were well served by main-road services, where dispersion would have been at the expense of the interests of longer-distance passengers.

What does this all mean?

Fifty years ago public transport was moving from a profitable business undertaking to a subsidised public

service. At that time the suburban trains and the government buses were subsidised but the private bus services weren't. This raised questions of equity. One of those questions was whether lack of subsidy resulted in a lower standard of service in the private-bus suburbs. On the whole, the evidence from walk/wait times was indeed that services were better in the government-bus areas than in those with purely private buses, and over the past five decades there has been a general trend towards equalising subsidies across the metropolitan area, abolishing the distinction between government and private operators. It would be interesting to know whether, in this process, service levels have been maintained or improved and whether they have been equalised across the suburbs, but this would require updating the walk/wait indices.

Several more specific conclusions apply to services as they stood in 1969.

The frequency of rail and ferry service was fairly similar for all lines, so the convenience of rail travel reflected route coverage. Though important
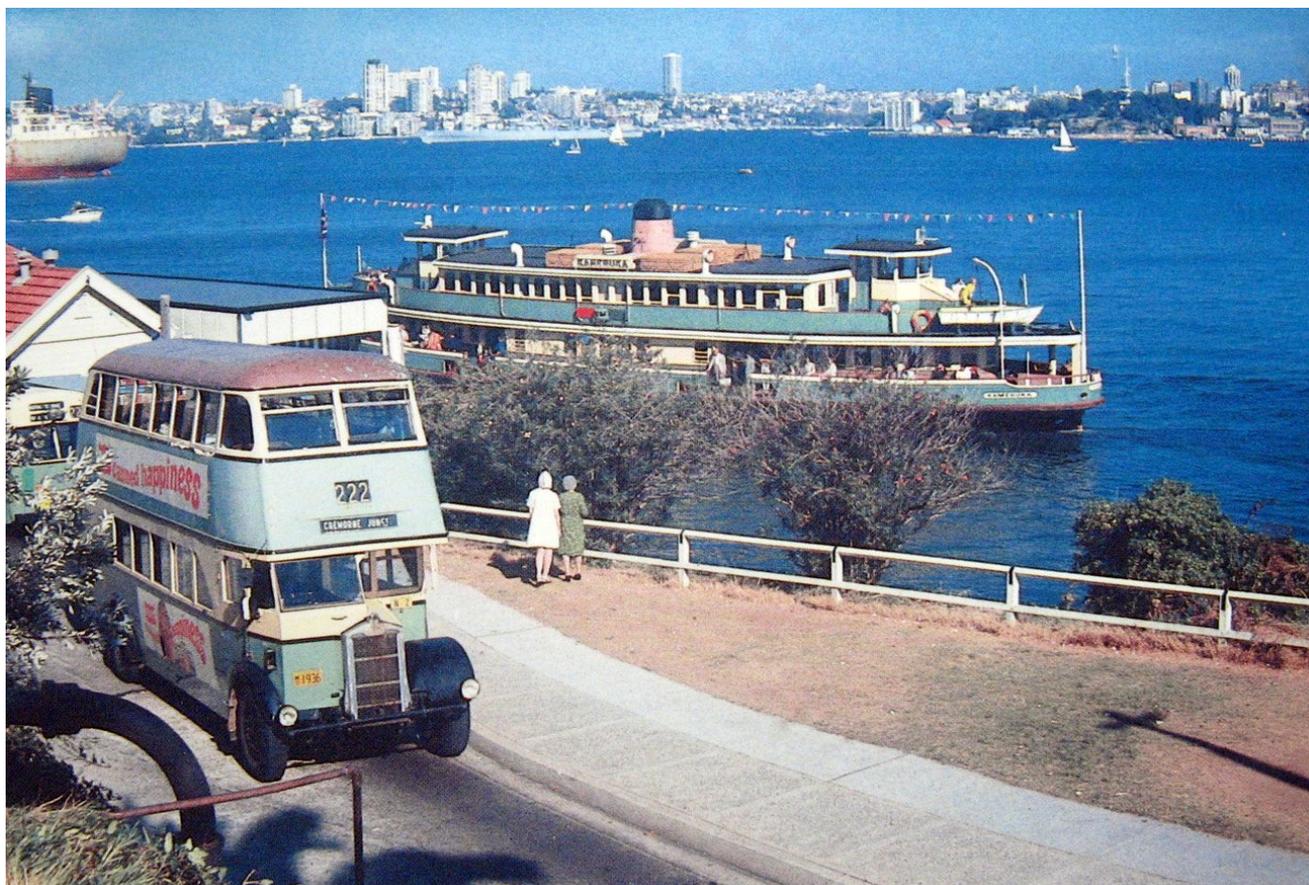
parts of the metropolitan area lacked rail services, it was notable that the lines served poor and wealthy suburbs alike.

Inter-suburban differentiation was more noticeable on the buses. Walking times increased with distance from the CBD, and waiting times even more so. In the inner eastern, southern and western suburbs the government provided a relatively intensive bus service, with peak-period frequencies about 50 per cent above the all-day average. The eastern suburbs were served by important radial routes, the inner south by a tangle of industrial workings and the inner west by an unnecessarily complicated muddle of local routes and railway-competing radials. Ryde, the North Shore and Warringah were dominated by the radial routes from the CBD to Ryde, Epping and Palm Beach. Together with the North Shore railway, buses in these suburbs concentrated on travel to and from the city centre, with a subsidiary specialisation in getting children to and from school. Mosman and North Sydney had reasonable off-peak services as befitted their proximity to the city centre while Lane

Cove had a tangle of private bus routes almost without parallel in its complexity and infrequency of service. In the St George suburbs services were mainly feeders to railway stations. They were mostly private, were unnecessarily complicated and tended to run on weekdays only. The services in Sutherland Shire were similar, save that frequency was generally as bad as on the Upper North Shore. In Bankstown and west of Strathfield bus routes converged on a number of major and secondary shopping centres, among which Parramatta was pre-eminent. Around these centres the bus services reached levels of convenience similar to the inner suburbs, but services tended to peter out towards the urban fringe. Peak-period frequencies were not much greater than off-peak, and weekend services were of reasonable frequency. In Auburn, relatively poor service was due to excessive route kilometreage – one had to know several timetables to work out where a bus would next appear. Similarly, in Greystanes service frequency suffered from multiple routes, some heading to Parramatta and others to Merrylands.

Sydney has long been known for the segregation of its population into rich and poor suburbs, which is much more marked than in any other Australian metropolitan area. In 1969 the rich tended to live in suburbs with poor bus services, reflecting low patronage due to high motorisation, but adversely affecting the mobility of teenagers. The poor were concentrated in inner suburbs with moderately good bus services and on the western fringes with relatively poor public transport services. Captive public transport users in the outer suburbs suffered walk/bus break-even distances of three kilometres or so. In such areas the use of public transport required a lot of walking, a lot of waiting or a lot of adjustment to timetables, or a mixture of all three. The alternative was to shoulder the costs of motoring. Fifty years ago housing costs on the Sydney outer fringe were a lot less than they are now, but even then the outer suburbs were a difficult choice for low income people thanks to motoring costs imposed in part by the inadequacies of the bus service.

Commonwealth Railways' PTTs

David Whiteford

AS AN ADDITION TO Victor Isaacs' record of Commonwealth Railways public timetables (The Times December 2019), the Western Australian Government Railways included at least a basic interstate timetable in its public timetable books.

The earliest WAGR issue after the 1917 opening of the Trans Australian Railway that is in my collection is that of 9 June 1919. On pages 26 and 27 of this 232 page book is Interstate time table with Port Augusta and capital city summary of times from Perth to Brisbane. Pages 151 to 181 contain Interstate fares, freight and regulations in great detail.

In the 3 December 1923 issue on page 15 is Table 42 Interstate Time Table East to West at a glance. As Table 42, it is actually the first table in this issue rather than in any numerical table sequence. Table 41 is the Hopetoun

Railway and 43 is Marble Bar, much later in the book. There is now a much briefer Interstate fares, etc. section on pages 15 and 16

In almost the same format but with some variations in title and table number (including having none) this summary table continued through many WAGR issues and publication format changes to at least the Winter 1960 issue. By then, there was information on Inter-system fares and parcel rates instead of interstate.

There was a major change with the smaller WAGR timetable books. In my July 1962 issue the timetable covered through to Cairns and was now much more detailed with many intermediate stations noted. Fares and other information was still provided. This continued to the June 1974 issue.

The annual rail and road tourist timetables and information books only included the Perth to Kalgoorlie times

of the new Trans-Australian and Indian-Pacific trains from its 1971-72 issue while the larger 1976 issue had a Sydney to Perth timetable only—which persisted through the remaining few issues to June 1980.

Although not a public timetable, the WAGR working timetables included the Trans-Australian railway services from the opening of the railway.

As the existence of these Commonwealth Railways' public timetables is of a minor nature, I haven't checked for all changes or the exact WAGR issue dates where issues are not in my collection. The various WAGR formats with publication dates are recorded in Victor's Western Australian feature in The Times of October 2019 and it can be assumed that the information described lasted through the publication history of these formats.

Table 42. INTERSTATE TIME TABLE — EAST TO WEST AT A GLANCE

PERTH —Depart 9 p m , TUESDAY, THURSDAY, SATURDAY
DAYS OF ARRIVAL AND DEPARTURE

	Wednesday	Friday	Sunday
KALGOORLIE—Arrive 1 49 p m			
Depart 2 15 p m	do	do	do
PT AUGUSTA—Arrive 6 0 a m	Friday	Sunday	Tuesday
Depart 8 30 a m	do	do	do
ADELAIDE—Arrive 7 50 p m	do	do	do
Depart 8 30 p m	do	do	do
‡ MELBOURNE—Arrive 1 3 p m	Saturday	Monday	Wednesday
Depart 4 0 and 5 0 p m	do	do	do
† SYDNEY—Arrive 10 35 and 11 35 a.m	Sunday	Tuesday	Thursday
Depart 2 0 and 3 30 p m	do	do	do

BRISBANE —Arrive 6 40 p m , MONDAY, WEDNESDAY, FRIDAY

BRISBANE —Depart 8 5 a m , TUESDAY, THURSDAY, SATURDAY
DAYS OF DEPARTURE AND ARRIVAL

	Wednesday	Friday	Sunday
† SYDNEY—Arrive 11 25 a m and 1 15 p m			
Depart 7 25 and 7 50 p m	do	do	do
‡ MELBOURNE—Arrive 12 51 and 2 2 p m	Thursday	Saturday	Monday
Depart 4 30 p m	do	do	do
ADELAIDE—Arrive 9 55 a.m	Friday	Sunday	Tuesday
Depart 10 45 a.m	do	do	do
PT AUGUSTA—Arrive 10 5 p m	do	do	do
Depart 10 50 p m	do	do	do
KALGOORLIE—Arrive †1 35 p m	Sunday	Tuesday	Thursday
Depart* 5 15 p m	do	do	do

PERTH —Arrive 9 7 a m MONDAY, 9 47 a m WEDNESDAY, FRIDAY

NOTE—Times east of Kalgoorlie are taken from "Commonwealth and Interstate Railway Guides" and are liable to alteration prior to the next issue of this publication. Times outside of Western Australia are not guaranteed

§ On Sundays arrives Kalgoorlie at 1 0 p m   * On Sundays train departs Kalgoorlie at 4 30 p m   †Two trains are run between Sydney and Wallangarra. ‡ Two trains are run between Melbourne and Sydney

INTERSTATE TIME TABLE.

Perth to Adelaide, Melbourne, Sydney and Brisbane

Miles	Stations		Monday, Wednesda and Friday only
			• •
			p m
	PERTH	dep	5 0
			Tuesday, Thursda and Saturday
			a m
375	KALGOORLIE	arr	9 15
	De	dep	10 0
			Thursday, Saturda and Monday
			a.m
1426	PORT AUGUSTA	arr	1 0
	De	dep	5 0
			p m
1685	ADELAIDE	arr	3 27
	De	dep	4 30
			Fri , Sun , and Tue
			a m
2168	MELBOURNE	arr	9 59
			Fri , Mon , and Tue
			p m
	De	dep	4 0, 5 0
			Sat , Tues , and Wed
			a m
2757	SYDNEY	arr	10 45, 11 30
			p m
	De	dep	† 2 0 3 30
			Sun Wed , and Thurs
			p m
3472	BRISBANE	arr	8 40

† Two trains are run between Sydney and Wallangarra.

NOTE—Times East of Kalgoorlie are taken from 'Commonwealth and Interstate Railway Guides '' and are liable to alteration prior to the next issue of this publication Times outside of Western Australia are not guaranteed For fares and conditions see pages 152-162.

• • During the quarantine period, owing to the influenza Epidemic, thi time table is suspended and trains will run only as advertised in the press from time to time

INTERSTATE TIME TABLE.

Brisbane, Sydney, Melbourne and Adelaide to Perth

Stations		Saturday, Monday, and Wednesday
		• •
		a m
BRISBANE	dep	8 5
		Sunday, Tuesday, and Thursday
		a m
SYDNEY	arr	‡ 11 25, 1 15
		p m. p m
De.	dep	7 25 7 50
		Monday, Wednesday, and Friday
		p m p m
MELBOURNE	arr	12 51 1 57
		p m
De.	dep	4 30
		Tuesday, Thursday, and Saturday
		a m
ADELAIDE	arr	9 55
De	dep	10 45
		p m
PORT AUGUSTA	arr	9 52
De	dep	10 30
		Thursday, Saturday, and Monday
		a m
KALGOORLIE	arr	10 20
		p m
De	dep	5 40
		Friday, Sunday, and Tuesday
		a.m
PERTH	arr	9 45

‡ Two trains are run from Wallangarra to Sydney

NOTE—Times East of Kalgoorlie are taken from " Commonwealth and Interstate Railway Guides ' and are liable to alteration prior to the next issue of this publication Times outside of Western Australia are not guaranteed For fares and conditions see pages 152-162

• • During the quarantine period, owing to the influenza Epidemic, this time table is suspended and trains will run only as advertised in the press from time to time

TABLE 25 TRANSCONTINENTAL SCHEDULE CAIRNS TO PERTH

THE SUNLANDER
Air conditioned Griddle carriage attached

		Sun Wed Thur	Mon Fri
CAIRNS	dep	7 15 a m Eastern Standard Time	10 00 p m Eastern Standard Time
			Tue Sat
Tully	arr	10 22	1 16 a m
De	dep	10 26	1 20
Townsville	arr	2 55 p m	6 00
De	dep	3 25	6 45
Mackay	arr	11 40	2 52 p m
		Mon Thur Fri	
De	dep	12 05 a m	3 15
Rockhampton	arr	7 03 a m	9 53
De	dep	7 30 a m	10 20
			Wed Sun
Gladstone	arr	9 37	12 29 a m
De	dep	9 50	12 40
BRISBANE (Roma Street)	arr	8 35 p m Change trains	12 15 p m Change trains

BRISBANE LIMITED EXPRESS
Air conditioned Buffet carriage attached

Daily
3 40 p m
8 19

			Daily
SOUTH BRISBANE	dep		3 40 p m
South Grafton	arr		8 19
De	dep		8 25
SYDNEY	arr		7 25 a m Change trains

THE INDIAN PACIFIC
Air conditioned sleeping dining and lounge carriages attached

		Mon Wed Thur Sat
SYDNEY	dep	3 15 p m Eastern Standard Time
Lithgow	arr	5 42
De	dep	5 54
Bathurst	arr	7 17
De	dep	7 24
Orange (East Fork)		9 03
Parkes	arr	11 19
De	dep	11 34
		Tue Thur Fri Sun
Broken Hill	arr	9 35 a m Eastern Standard Time
		Alter watches 30 mins back
De	dep	9 30 a m Central Standard Time
Peterborough	arr	1 22 p m

Connection to Adelaide		Tue Thur Fri	Sun
Peterborough	dep	1 57 p m	2 50 p m
ADELAIDE	arr	6 10	6 47

Peterborough	dep	1 37 p m	
		Tue Thur	Fri Sun
		p m	p m
Port Pirie	arr	3 16	3 06

Connection from Adelaide		Tue Thur Fri Sun
ADELAIDE	dep	12 30 p m Central Standard Time
Port Pirie	arr	3 50 (4 6 p m Sun)

Port Pirie	dep	4 45 p m
Port Augusta	arr	6 30
De	dep	6 40
		Wed Fri Sat Mon
Tarcoola	arr	1 35 a m
Cook		8 25
		Alter watches 90 mins back
De	dep	7 30 Western Standard Time
Rawlinna		2 30 p m
Kalgoorlie	arr	7 45
De	dep	8 30
		Thur Sat Sun Tue
PERTH TERMINAL	arr	7 0 a m

		SYDNEY	SOUTHERN AURORA	SPIRIT OF PROGRESS	INTERCAPITAL DAYLIGHT

SOUTHERN AURORA
Sleeping berth passengers only
Dining and club carriages attached
Meterail facilities
Air conditioned

SPIRIT OF PROGRESS
Sitting and sleeping berth passengers
Buffet carriage attached
Air conditioned

INTERCAPITAL DAYLIGHT
Buffet carriage attached
Air-conditioned

			Daily	Daily	Mon to Sat
SYDNEY	dep		8 00 p m	8 10 p m	7 45 a m
MELBOURNE (Spencer Street)	arr		9 00 a m	9 55 a m	8 20 p m

THE OVERLAND —Air conditioned sitting and sleeping carriages attached

			Daily
De	dep		8 55 p m
Ballarat	arr		10 57
De	dep		11 03
Serviceton	arr		3 20 a m Eastern Standard Time
			Alter watches 30 mins back
			3 00 Central Standard Time
De	dep		6 17
Murray Bridge	arr		
De	dep		6 22
ADELAIDE	arr		8 50 a m Change trains
De	dep		12 30 p m Air conditioned
Port Pirie	arr		3 50 Change trains

TRANS AUSTRALIAN —Air conditioned dining sleeping and lounge carriages attached

De	dep		4 45 p m
Port Augusta	arr		6 30 p m
De	dep		7 00
			Daily
Tarcoola			1 35 a m
Cook	arr		8 25
			Alter watches 90 mins back
De	dep		7 30 Western Standard Time
Rawlinna			2 30 p m
Kalgoorlie	arr		7 45
De	dep		8 30
			Daily
PERTH TERMINAL	arr		7 00 a m

Fast and Slow Sometime in New Zealand

JAMES T WELLS

THE TABLE ON P6 OF THE January 2020 "*The Times*" for NZR's Invercargill to Dunedin line is a fascinating document.

Never before in a public passenger timetable have I seen a train that required three columns to show the times – this was for train No. 498 – more on this later.

The contrast between fast and slow services was quite marked. We don't know the date of the timetable but it's clearly from that era (1950?) when local services were mixed— i.e. combined goods (freight) and passenger trains.

Bear in mind that the NZR used Cape Gauge – 1067mm or 3'6" in Imperial measure.

First of all the fast trains. The No. 144 MWF Limited Express was allowed only 57 minutes start to stop Invercargill to Gore. The distance as shown is 40 miles (64 km) so the average speed was 42.1 mph (67.8 km/h). This is good going as the speed limit was probably 50 mph (80 km/h). Could a NZ reader confirm this please? Certainly, NZR Railcars were allowed 60 mph.

Bear in mind that the train would have had to slow to maybe 15 mph or slower to exchange safeworking staffs at intermediate stations. It looks like there were three of these, so almost sustained running at or near the limit would have been required.

Note that, as was common in the era, the timetable shows the altitude of stations as well as distances. The line

rose 95 feet in the five miles between Woodlands and Morton Mains but this represents an average gradient of only 1 in 278 which would be of no consequence for a passenger train.

Overall the train was allowed 3hr 50min for the journey to Dunedin - 139 miles (224 km) to give an average speed of 36.3 mph (58.4 km/h) but this translates to 39.3 mph (63.2 km/h) allowing for dwell time at the four intermediate stops.

On TTS [Tues Thurs Sats], the Lyttelton train (connection to the Wellington steamer) ran as an "Express" No. 174, with hostess service but starting earlier (7 am) and taking half an hour longer to Dunedin. Some of this was due to the three extra stops before Gore.

MWF [Mon, Wed, Fri] passengers benefitted from an afternoon service at 1.25 pm - No. 430 to Dunedin but taking a leisurely 4hr 35min. On Fridays and Sundays there were evening expresses.

Now to the s-l-o-w services. Where better to start than the aforementioned No. 498!

This left Invercargill at 5.30 a.m. MWF and arrived at its destination – Balclutha 87 miles (140 km) away at 2.32 p.m. Slow, yes – only about 9.7 mph (15.6 km/h). A good runner could keep up quite happily.

It was almost certainly a mixed train and probably did what the Victorians used to call roadside work, i.e. shunting all stations as required to attach or detach goods wagons.

At Mataura there is the first of the extended dwells—40 minutes—and this accounts for the first break of the timetable over columns. At 8.20 the train sets off for Gore for another extended dwell (8.40 to 9.30) but has the Limited Express on its tail – due Gore 8.57. One wonders how often No. 498 got held back at Mataura to let the Limited through.

There is something quite weird about the timetable for this section on MWF and that is train No. 516 shown as leaving Mataura at 8.00, just 20 minutes before No. 498 and running only to Gore.

This looks like a branch line service with the junction at Mataura but there never was a branch line from that station. If it got delayed *en route* No. 498 would have been delayed, as would the Limited. Nervous times at train control! Was any shunting ever done at Charlton, the intermediate station?

The third column of the timetable for this train shows it resuming its journey at Gore after refreshments at 9.30 and following the Limited. No. 498 had an extended dwell at Waipahi (11.15 to 11.32) but it was not too long to wait for a leisurely lunch at Clinton (12.07 to 13.06).

On TTS No. 500 ran to a similar but quicker timetable; it dwelled at Woodlands for the Express to overtake.

Also very slow was the morning train from Clinton to Dunedin—73 miles— 3hr 50min on Wednesdays, but over half an hour longer on MF.

Sundays at Central

Geoff Mann

It is 1955 in Sydney and a few families in our street have bought an Austin A40 or Holden FX since the lifting of wartime restrictions. An upmarket (if that term was around in 1955) nearby purchase is a Holden bodied Chevrolet – General Motors seems to use local body builders for their US chassis.

Most people, however still use the trains for their Sunday outings. Unless they choose to venture east on the Manly ferry, the only directions available are North, South or West. But what an array of trains to select from!

So let's look first at the list of morning departures (left column):

Stiff cheese if we want to go to Lithgow in the morning—the first train is not until 6:25pm. But it is an express and closely followed by a 6:45pm stopper.

Following the rush of morning departures, almost nothing happens until evening, although there are a few afternoon departures on the North (not shown), mainly to long distance destinations (Wallan-garra, Singleton and Moree).

Looking back from today, the evening peak is even more interesting (middle and right columns). Those 30 class tanks must have been frenetic, disposing of incoming car sets and making up the consists for the evening Mails [picture at right].

It would be a late night home arrival for those that departed Muswellbrook at 4:00pm; probably peckish too, given that there was only a 19 minute stop at Newcastle for dinner plus the usual 8 minutes at Gosford.

Note the various gaps (pink-shaded). 7:50 to 8:14 and 8:20 to 8:46 in arrivals. A pronounced pause in departures was from 6:45 to 7:25. Was this to allow the 30 class shunters to take water? Or a tea break for those manning the departure indicator?

Including the North West Mail that departed at 3:30pm, there are 13 titled Mail Trains in total. Is this the most that were ever operated at one time?

Interestingly, there were no day trains

AM Departures	PM Arrivals	PM Departures
07:19 Gosford	5:15 Wollongong	5:05 Newcastle Express
07:34 Wyong	5:26 Wyong	5:28 Canberra
08:00 Gosford	5:33 Nowra	5:45 Mt Victoria
08:03 Wollongong	5:56 Gosford	5:50 Cessnock Express
08:15 Gosford	6:00 Mt Victoria	6:00 Newcastle
08:20 Mt Victoria	6:12 Gosford	6:08 Pt Kembla
08:22 Moss Vale via Loop	6:15 Wollongong	6:20 Newcastle
08:35 Mt Victoria	6:28 Wyong	6:25 Lithgow
08:36 Wollongong	6:31 Mt Victoria	6:30 Pt Kembla
08:42 Newcastle	6:43 Wollongong	6:45 Lithgow
08:45 Thirroul	6:48 Gosford	
08:47 Gosford	6:56 Wyong	
08:58 Mt Victoria	7:13 Newcastle	
09:10 Nowra	7:20 Mt Victoria	
09:15 Wollongong	7:25 Maitland	7:25 Coonamble Mail
09:15 Newcastle	7:27 Wollongong	7:30 Melbourne Express
09:20 Wyong	7:44 Wollongong	7:40 Brisbane Limited
09:25 Wollongong	7:50 Woy Woy	8:03 Brisbane Express
09:25 Bundanoon		8:10 Melbourne Limited
09:35 Gosford	8:14 Gosford	8:12 Nowra
	8:18 Wyong	8:15 North Coast Mail
	8:20 Mt Victoria	8:20 Temora Mail
		8:30 Forbes Mail
	8:46 Gosford	8:35 Newcastle
	8:49 Kiama	8:58 Cooma Mail
	8:53 Moss Vale via Loop	9:03 Kempsey Mail
	8:54 Newcastle	9:18 Canberra Mail
	8:59 Lithgow	9:20 Glen Innes Mail
	9:09 Bundanoon	9:25 Through Mail
	9:18 Mt Victoria	9:27 Wyong
	9:22 Woy Woy	9:30 Cowra Mail
	9:28 Wollongong	10:00 Mt Victoria
	9:35 Newcastle	10:05 South West Mail
	9:44 Gosford	10:30 Mudgee Mail
	9:47 Nowra	
	9:52 Cessnock	
	10:09 Goulburn	
	10:14 Newcastle	
	10:25 Canberra	
	10:44 Bathurst	
	10:47 Wyong	
	10:53 Muswellbrook	

beyond Bundanoon on the main south line.

The Short North to Gosford/Wyong was the clear favourite destination for day-trippers. No doubt that The Entrance Red Bus Service and others would have carried droves to the coast.

In those days, one could still travel on every line (except The Rock to Westby – line temporarily closed) in some sort of passenger accommodation. Most timetables showed connections (of varying lengths!) to and from Sydney. An exception was Uranquinty to Kywong. Not hard to see why, knowing Kywong, but a bit unfortunate if you were told to go to Bulgary.

Another odd one out was the well-known service between Narranderra and Roto, providing a connection from the Riverina to and from Broken Hill.

My thanks to the kind donor of the February 1955 Department of Railways New South Wales Timetable and to Len Regan for the DL. A wonderful source of interest and fascination for times past.

STATIONS.	SUNDAYS.																										
	g a m	a m	a m	g a m	a m	a m	p m	p m	p m	g p m	p m	p m	g p m	p m	p m	p m	p m	p m	p m	p m	p m	p m	g p m	p m	p m	g p m	g p m
NOWRA dep					6 40							1 40									5 28						•
(Bomaderry)																											
Jasper's Brush					a							a									a						•
Berry					6 58							1 58									5 48						•
Toolijooa			•		a							a									a						•
Gerringong					7 13							2 14									6 6						•
Omega					a							a									6a10						•
KIAMA arr			•		7 25							2 28									6 20						
Do dep	6 0				7 27					1 55		2 30							5 9		6 22				From Moss Vale	9 50	
Bombo	6 4				7 31					1 59		2 34							5 13		6 26					9 54	•
Minnamurra	6 10		•		7 37					2 5		2 41							5 19		6 33					10 0	
Shellharbour	6 14		•		7 41					2 9		2 45							5 24		6 37					10 4	
Oak Flats	a				e					a		a							a		a					e	
Albion Park	6 24		•		7 51					2 20		2 57							5 37		6 50					10 14	•
Yallah	a		•		7a55					e		a							a		e					a	
Dapto	6 34		•	•	8 1					2 30		3 10							5 50		7 3					10 24	•
Kembla Grange	a				a					a		a							a		e					a	
UNANDERRA	6 46				8 12					2 40		3 22							6 3		7 17				9 54	10 44	
PORT KEMBLA dep				7 40									3 42						•					8 40		•	11 45
Port Kembla North				7 43									3 45						•					8 43	•		11 43
Cringila				7 46									3 48											8 47			11 51
Lysaght's				7 49									3 51														11 54
Coniston	6 51			7 53	8 17					2 45		3 28	3 55		• •				6 10		7 23			8 52	9 59	10 49	11 53
WOLLONGONG arr	6 54	Arrives Sutherland 8 53 a m		7 57	8 20					2 43		3 31	3 58		•				6 13		7 26			8 55	10 2	10 52	a m 12 1
Do R dep			7 38	8 0	8 30						3 0	3 41	3 59	4 14	4 27	5 9	5 27		6 24	7 5	7 39			8 59	10 7		12 4
North Wollongong			7 41	8 3	p	Arrives Sutherland at 11 40 a m	Arrives Sutherland at 1 10 p m	Arrives Sutherland at 2 40 p m	Arrives Sutherland at 3 40 p m		3 3		4 2		4 30	5 12	5 30	Arrives Sutherland at 7 40 p m	6 27	7 8	7 42	Arrives Sutherland at 10 10 p m		9 2	10 10		12 7
Balgownie			7 44	8 7	p						3 6		4 5		4 33	5 15	5 33		6 31	7 11	7 46			9 5	10 13		12 11
Towradgi			7 47	8 10							3 9		4 8		4 36	5 18	5 36		6 34	7 14	7 49			9 8	10 16		12 14
Corrimal			7 50	8 13	8 37						3 12		4 11	4 22	4 39	5 21	5 39		6 37	7 17	7 52			9 11	10 19		12 17
Bellambi			7 53	8 16	p						3 15		4 14	4 25	4 42	5 24	5 42		6 40	7 20	7 55			9 14	10 22		12 21
Woonona			7 56	8 19	p						3 18		4 17		4 45	5 27	5 45		6 43	7 23	7 58			9 17	10 25		12 24
Bulli			8 0	8 23	8 45						3 22		4 21	4 31	4 49	5 31	5 49		6 47	7 27	8 2			9 21	10 28		12 28
Thirroul			8 4	8 27	8 49						3 26		4 25	4 35	4 53	5 35	5 53		6 51	7 31	8 6		8 58	9 25	10 32		12 32
Austinmer			8 7	8 33	8 52						3 29			4 38	4 56	5 38	5 56		6 55	7 34	8 10		9 1	9 28			12 36
Coledale			8 12	8 38	p						3 34			4 43	5 1	5 43	6 1		7 0	7 40			9 6	9 33			12 41
Wombarra			8 17	8 43	p						3 39			4 48	5 6	5 48	6 6		7 5	7 45			9 11	9 38			12 46
Scarborough			8 22	8 48	p						3 44			4 53	5 11	5 53	6 11		7 10	7 51			9 15	9 43			12 51
Coal Cliff South																							9 26				
Coal Cliff			8 28		p						3 50				5 17	5 59	6 17		7 16	7 57			9 28	9 49			
Stanwell Park			8 34		p						3 56				5 23	6 5	6 23		7 23	8 3				9 55			
Otford			8 40		p						4 2				5 29	6 11	6 29		7 30	8 10				10 1			
Lilyvale			8 45		p						4 7				5 34	6 16	6 34		7 35	8 15				10 6			
Helensburgh		8 23	8 51		p	11 10	12 40	2 10	3 10		4 13				5 40	6 22	6d40	7 10	7 43	8 21	8d47	9 40		10 12			
Waterfall		8 33	9d 4		9p38	11 20	12 50	2 20	3 20		4d26				5 53	6 35		7 20	7 57	8 34		9 50		10d25			
Sutherland		9x 3	9d18		9d53	11x44	1x14	2x44	3x44		4d39	4d58		5d42	6d 8	6d50	7d 8	7x44	8d11	8d53	9d12	10x14		10d39			
Hurstville		9 20	9d35		10d 8	12 1	1 31	3 1	4 1		4d54	5d12	•	5d55	6d24	7d 7	7d24	8 1	8d27	9d 8	9d27	10 31		10d53			
Sydenham R		9 37	9d46		10d18	12 13	1 43	3 13	4 14		5d 4	5d24		6d 4	6d34	7d17	7d34	8 14	8d39	9d18	9d39	10 48		11d 3			
Redfern		9 44				12 19	1 49	3 19	4 20							7d24	7d41	8 20	8d46			10 55		11d10			
SYDNEY arr		9k46	9 55		10 27	12k21	1k51	3k21	4k22		5 15	5 33		6 15	6 43	7 27	7 44	8k22	8 49	9 28	9 47	10k57		11 13			

For notes e d and R, see page 4 p One class accommodation only k Arrives at Central (Electric) Station p Stops when required to set down passengers from beyond Wollongong

x Change trains

Junction at Unanderra for line to Moss Vale, and at Wollongong for Port Kembla Line

Do not obstruct Railway officials in the performance of their duties.

McWilliams Wines
VINCENTS APC
Take VINCENTS APC with Confidence!

THE NEXT TRAIN STARTS.
THE NEXT TRAIN STARTS.

SUNDAYS

Train columns (left → right): Kempsey Mail · North Coast Mail · Coff's Harbour Mail · North-West Mail · BRISBANE LIMITED EXPRESS (via North Coast) · Glen Innes Mail · BRISBANE EXPRESS (via North Coast) · NEWCASTLE EXPRESS (Air-conditioned — Reservation of seats compulsory. See page 23) · BRISBANE EXPRESS (via Wallangarra)

STATIONS	a m	a m	a m	a m	a m	a m	a m	a m	a m	a m	a m	a m	p m	p m	p m	p m
NEWCASTLE R dep								7 32	8 22							
Civic									8 25							
Wickham									8 28							
Hamilton								7f36	8 32							
BROADMEADOW	2 7	2d20	2d51	3 14	3d40	5 31	5d49	7f40	8 37	9 41					9 41	
ADAMSTOWN									8 41							
Kotara									8 45							
Cardiff	e	b	b	e		k			8 51							
Cockle Creek	e	b	b	e		k			8 57							
Teralba	e	b	b	e		k			9 3							
Booragul									9 6							
TORONTO (Lake Macquarie)								7 43		7 43	9 55					
FASSIFERN	e	2b58	3b29	3g42			5r59				9f 1	9 12	10r 7			
Awaba												9 19				
Dora Creek												9 30				
Morisset												9 37				
Wyee												9 46				
Warnervale												9 56				
Wyong	3a16	3b39	4b10	4g23		6 40		8t36			10 2	10 2	3 5			3 40
Tuggerah												10 6				3 45
Ourimbah												10 15	3 18			3 56
Lisarow												10 20				4 1
Niagara Park												10 23				4 4
Narara												10 26				4 7
GOSFORD R arr	3 35	3 58	4 29	4 43		6 59	7 28				10 31	11 5	3 28			4 12
· Do dep	3 40	4d 5	4d34	4d48		7 18	7d43	8t54			10 39	11d13	3 36	3 45	4 5	4 20
Point Clare											10 44		3 50	4 10		4 25
Tascott																
Koolewong																
Woy Woy	3a51	4b16	4b45	4g59		7 28					10 55		4 3	4 23		4 38
Wondabyne											11a 5		4a13	4a33		4a48
Hawkesbury River				5g15		7 48					11 16		4 3	4 24	4 44	4 59
HORNSBY R arr	4 44	5 9	5 38	5g15	6 12	8 25	8 44				11 59	12 14	4 40	5 10	5 28	5 43
Do dep	4d46	5d12	5d40	5d53	6d14	8d27	8d46	9d44			12 2	12d16	4d42	5d12	5d30	5d45
STRATHFIELD R	5d16	5d42	6d 2	6d15	6d36	8d59	9d 8	10d 7			12d26	12d38	5d11	5d41	5d56	6d12
SYDNEY arr	5 37	5 57	6 17	6 36	6 51	9 15	9 23	10 20			12 42	12 53	5 26	5 56	6 12	6 23

SUNDAYS—continued

Train columns (right-hand side): trains "From Maitland", "From Cessnock", "From Muswellbrook".

STATIONS	p m	p m	p m	p m	p m	p m	p m	p m	p m	p m	p m	p m	p m	p m	p m	p m
NEWCASTLE R dep			3 37	3 52					4 50		5 40			6 48		7 27
Civic																
Wickham																
Hamilton			3f44	4f 0					4 57		5f46			6f56		
BROADMEADOW			3f49	4f 4					5 1		5f51		6 32	7f 1		7 36
ADAMSTOWN									5 5							
Kotara									5 10							
Cardiff									5 17				6f43	7f12		
Cockle Creek									5 23				6f49	7f18		
Teralba									5 29							
Booragul									5 32							
TORONTO (Lake Macquarie)			4 0						5 30				6 15			7 52
FASSIFERN			4f12						5 40				7f 1			8f 2
Awaba									5 47							
Dora Creek									5 59							
Morisset				4 51					6 7				7 25			
Wyee									6 16							
Warnervale									6 27							
Wyong	4 20	4 58	5 15				5 57		6 34		7 0		7d44	8 7	6 19	8d42
Tuggerah	4 25								6 39							
Ourimbah	4 36						6 10		6 48						8 32	
Lisarow	4 41								6 53							
Niagara Park	4 44								6 56							
Narara	4 47								6 59							
GOSFORD R arr	4 52	5 18	5 35				6 23		7 4		7 20		8 3	5 26	8 42	9 4
Do dep	4 45	5 0	5 26	5 43		6 5	6 28	6 45	7 12	7 30		7 43	8d11	8d24	8 50	9 12
Point Clare	4 50	5 5				6 10		6 50				7 48			8 55	
Tascott																
Koolewong																
Woy Woy	5 3	5 18			6 3	6 23	6 40	7 2		7 32		8 0			9 7	
Wondabyne	5a13				6a13	6a33		7a12				8a10			9a17	
Hawkesbury River	5 24	5 36			6 24	6 44	6 58	7 23		7 50		8 21			9 30	
HORNSBY R arr	6 13	6 29	6 45		7 8	7 28	7 35	8 7	8 14	8 29	9 36	9 12	9 35	10 6	10 14	
Do dep	6d10	6d15	6d31	6d47	7d10	7 30	7d37	8d 9	9d16	8d31	8d38	9 5	9d14	9d37	10d 8	10d16
STRATHFIELD R	6d32	6d39	6d57	7d 9	7d36	7d56	8d 1	8d31	8d38	8d56	9d 0	9d29	9d36	9d59	10d32	10d33
SYDNEY arr	6 48	6 56	7 13	7 25	7 50	8 14	8 18	8 46	8 54	9 12	9 15	9 44	9 52	10 14	10 47	10 53

For notes e, b, c, d, f and R, see page 4

j Stops when required to set down passengers from beyond Maitland　Notice must be given to the Guard
k Stops when required to set down passengers from beyond Singleton　Notice must be given to the Guard
n Stops regularly to pick up passengers　also to set down from beyond Singleton
t Passengers are not allowed to travel from Wyong to Gosford by this train
§§ Stops where required, between Hornsby and Strathfield, or at Burwood　Croydon, Ashfield and Redfern, to set down passengers from beyond Hornsby　Notice must be given the Guard
§ Stops where required between Hornsby and Strathfield to set down passengers from beyond Hornsby　Notice must be given to the Guard
Junction at Fassifern for **Toronto Line** and at Adamstown for **Belmont Line**

"Fallen Timetable" mural by David Jack & Joe Attard