

Why are young people driving less? Trends in licence-holding and travel behaviour

Tim Raimond and Frank Milthorpe

NSW Bureau of Transport Statistics

Email for correspondence: tim.raimond@transport.nsw.gov.au

Abstract

There has been a long term trend towards higher rates of licence-holding in the population, driven largely by increases in female licence-holding in older age groups. This paper presents evidence of the continuation of this trend in recent years of the Sydney Household Travel Survey. However, the paper focuses on what may be the beginning of a new trend at the other end of the age spectrum. Evidence is presented that people aged under 35 are becoming less likely to hold a driver's licence. This paper examines licence-holding trends for young people in NSW and Sydney, explores possible reasons for these trends, and their policy and planning implications.

1. Introduction

When examining trends in public transport mode share, levels of road congestion, and other measures of transport system performance, it is rare to consider the impact of driver licence penetration on these trends. However, whether a person holds a Driver's Licence or not has a significant impact on their mode choice. The importance is recognised in the structure of Sydney's Strategic Travel Model (STM), which has a licence-holding sub-model to predict future levels of licence-holding. The outputs of this model feed into the trip generation, distribution and mode choice decisions within the STM.

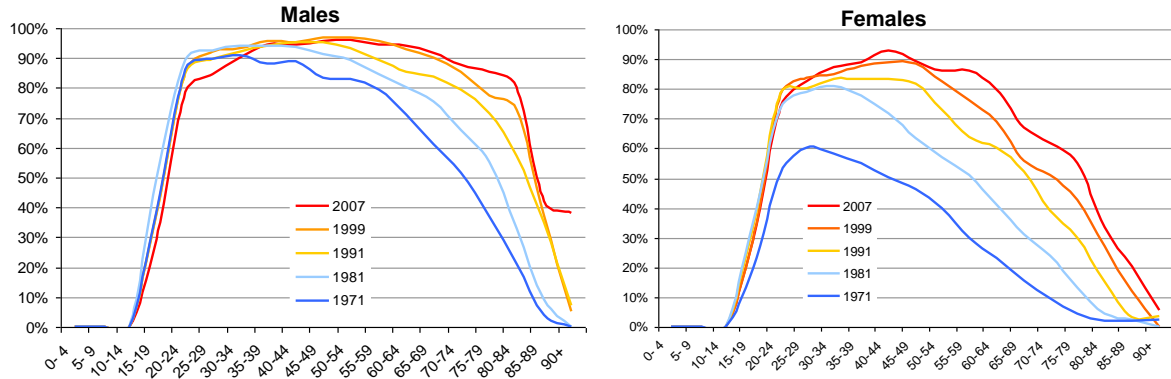
The current STM model for licence-holding predicts that, broadly, licence-holding will remain at existing age-specific proportions for those aged under 50, but that licence-holding rates will increase for older members of the population. This is a continuation of a long term trend, particularly among females, of greater licence-holding. The popularisation of household car ownership in the 1950s and 1960s, followed closely by greater levels of female education and workforce participation have meant licence-holding rates among females are approaching male licence-holding rates. These cohorts with high levels of licence-holding are now around 50 or 60 years of old, and will carry their historically high levels of licence-holding into old age.

The Bureau of Transport Statistics (BTS) has recently been re-estimating its STM using Sydney Household Travel Survey (HTS) data, and in the process has examined the most recent licence-holding statistics. This analysis, summarised in Figure 1, has revealed a continuation of the previously established trend of higher levels of licence-holding among older members of the population, particularly females, but also revealed a recent trend towards lower levels of licence-holding among younger people, particularly those under 35, and particularly males.

This paper explores this latter issue in more depth using Roads and Traffic Authority (RTA) Licence Statistics combined with Estimated Resident Population (ERP) from the Australian Bureau of Statistics. It also corroborates the finding of lower licence-holding among younger

cohorts with evidence from the HTS, and examines the demographic features of this phenomenon and its impact on travel behaviour.

Figure 1: Proportion of Sydney SD population with Provisional or Full Driver's Licence by single year of age and gender, 1971 to 2007



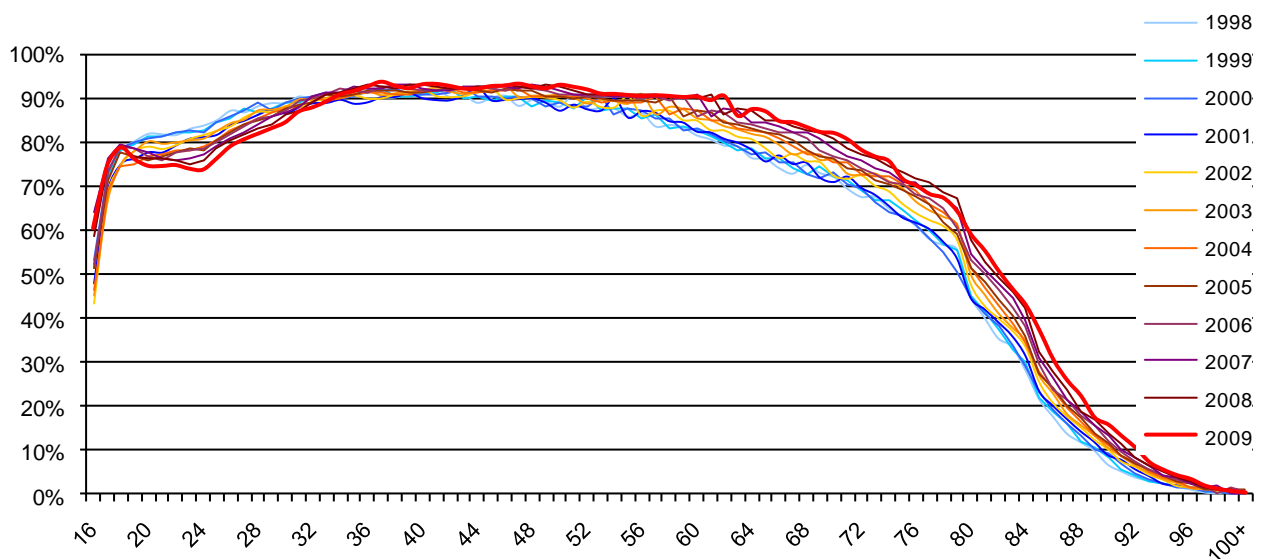
Source: Bureau of Transport Statistics, Household Travel Surveys

2. Licence-holding Trends

Licences are currently held by 83% of the NSW population aged over 16. This has increased from 81% over the last decade. The main reason for this increase is higher licence-holding among older cohorts.

Figure 2 shows the pattern of licence-holding (including Learner, Provisional and Full licences) by age for NSW residents over the last 11 years. It divides annual licence-holding statistics from the RTA by annual ERP from the ABS to provide the proportion of licenses held by each age cohort. The latest year, 2009, is highlighted in red.

Figure 2: Proportion of NSW population with Driver's Licence by single year of age



Source: NSW RTA Driver's Licence Statistics and Australian Bureau of Statistics ERP for NSW

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Figure 2 clearly confirms a continuation of trends established in earlier work (eg Transport Data Centre, 2001) of greater levels of licence-holding flowing through to older age groups as high licence-holding cohorts age. Figure 1 shows that in the 11 years from 1998 to 2009, licence-holding by 65 year olds has increased from 76% to 87%. This is a large shift, with potentially significant implications for the travel choices of this group in retirement. This cohort will be more mobile as it ages than the previous generation, but will also potentially add to the externalities associated with road use, including congestion and emissions.

Figure 2 also shows that at the younger age groups, applications for a learners permit at 16 are at record highs, but these highs are not being converted into licences to the same extent as they were a decade ago. There is a marked drop-off in licence-holding for those under 35 years of age. For example, in 1998 84% of 25 years olds held a licence. That has fallen to 74% in 2009.

The analysis in Figure 2 relies on bringing together data from two separate sources – the RTA Licence Database, and the ABS Estimated Resident Population (ERP). There are some risks in relying on these two data sources to be strictly comparable, particularly given there may be changes in the quality of licence data or in the definition of who is counted in the population estimates. Corroborative evidence has therefore been sought via analysis of licence-holding trends from the Sydney Household Travel Survey (HTS).

Figure 1, and Table 1 below, from the HTS, confirm what has been observed at both ends of the spectrum in the licence-holding data. An unexpected result is that a lower proportion of the population holds a full licence in 2008/09 than was the case 2001/02. When provisional licences are added, there is a slight increase in the proportion of those with an “independent” licence from 80% to 81%. Table 1 indicates that the large drop the proportion of younger people with a licence is beginning to offset the increases in older licence-holding at ages over 55. This is a new phenomenon in NSW, with considerable implications for travel forecasts, and for transport and land use policy.

Table 1: Percentage of persons with full Driver’s Licence by age and year, Sydney GMA

Age Group	Year		
	1991/92	2001/02	2008/09
15-19	23%	23%	3%
20-24	79%	80%	51%
25-34	86%	88%	83%
35-44	89%	92%	91%
45-54	86%	91%	92%
55-64	74%	85%	89%
65+	55%	63%	68%
Full	74%	79%	76%
Provisional	2%	1%	5%
Full + Provisional	76%	80%	81%

Source: Bureau of Transport Statistics, Household Travel Survey, Sydney Greater Metropolitan Area, 15+ yrs

The remainder of this paper explores the issue of younger licence-holding trends in more depth, investigates whether this trend is unique to NSW, and explores why it might be happening.

2. Possible explanations for lower licence-holding by young people

This paper explores two possible explanations for the changing patterns of licence-holding among the younger population. The first is a very practical reason – there has been a significant change in the NSW Driver Licensing Scheme over the last decade. The second is that there have been major societal changes in urbanisation, education and communications over the last decade which may influence the likelihood of living at home with parents, car ownership and thus licence-holding. We examine these in turn.

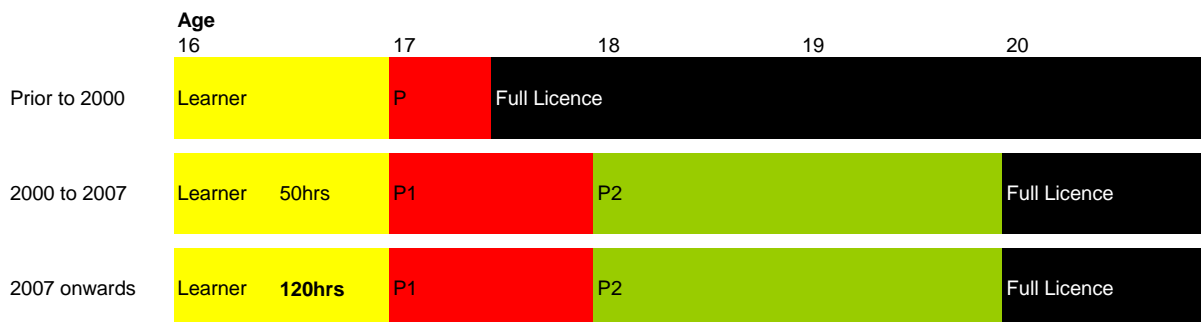
2.1. Graduated Licensing Scheme

There were major changes to the NSW Drivers Licensing scheme from July 1, 2000 – these are summarised in Figure 3. The new scheme, termed a Graduated Licensing Scheme (GLS), was adopted to address the overrepresentation of younger drivers (under 25) in fatal and serious accidents.

The reforms are significant in three ways in terms of their potential impact on levels of licence-holding.

1. Firstly, they delayed the opportunity to gain an unrestricted licence by 36 months, from age 17.5 to age 20.
2. Secondly, they introduced a compulsory minimum amount of supervised driving experience before a provisional licence could be obtained. Prior to the GLS, a person with a learners permit was only required to wait 6 months before sitting a driving test, with no specified training – the AIS (2000) estimated that learner drivers averaged about 20 hours driving experience at that time. In 2000, the requirement became 50 supervised hours, and this was more than doubled in 2007 to 120hrs of supervised driving, including 20 hours of night driving (in 2009 it was deemed that a maximum of 10 hours with a qualified driving instructor could count for up to 30 hours of logged driving time, reducing the effective hours to 100).
3. Finally, there a range of additional tests, each of which has a cost, and when a test is passed, there is a licence cost to pay. This potentially delays the ability of some young people to gain a full licence.

Figure 3: Driver’s Licence Schemes in NSW (earliest possible time licences could be held)



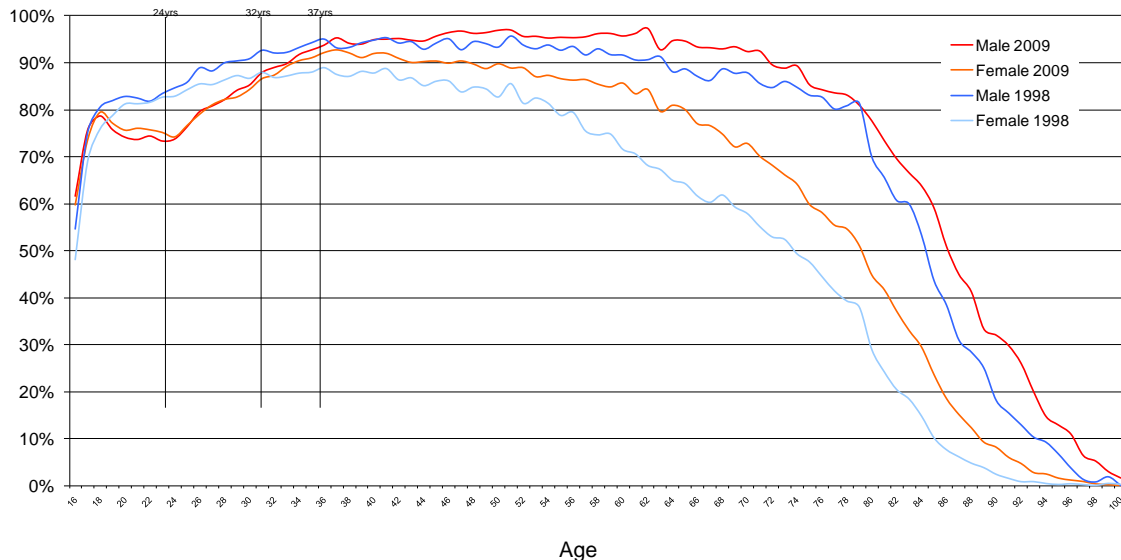
There has been much community comment focussed on the “onerous” driving experience requirements, countered by statistics suggesting lower fatalities for P-plate drivers (eg SMH, 2008). Also of concern was the delay this may cause in allowing young people to access independent mobility. A 2009 concession, to allow 1 hour of professional driving tuition to

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count for 3 hours of driving experience (up to a maximum of 10 hours with a driving instructor) was, in part, a response to these criticisms.

Figures 4 and 5 examine the possible impact of these reforms on licence-holding in more detail. Figure 4, which focuses on licence-holding levels in 1998 for males and females, and contrasts this with the situation in 2009, certainly suggests that there has been a failure to convert Learner permits into independent licences for many candidates under 30.

Figure 4: Licence-holding in 1998 and 2009 by males and females in NSW



Source: NSW RTA Driver's Licence Statistics and Australian Bureau of Statistics ERP for NSW

There is a gap of around 10% between the levels of licence-holding for those in their 20s in 1998, and those in their 20s in 2009. Licence penetration was at 80-90% for this age group a decade ago, but has dropped to 70-80% now.

Figure 4 does suggest, however, that since licence-holding levels do not return to historically high levels until the cohorts currently in their early 30s for females, and the late 30s for males, that there may be factors other than the GLS at play. The GLS has only been in operation for the last 10 years, so should only have had a significant impact on the licence-holding propensity of those aged under 30.

Figure 5 excludes learner drivers, focussing on the penetration on independent licences (provisional and full) among those under 40 years of age.

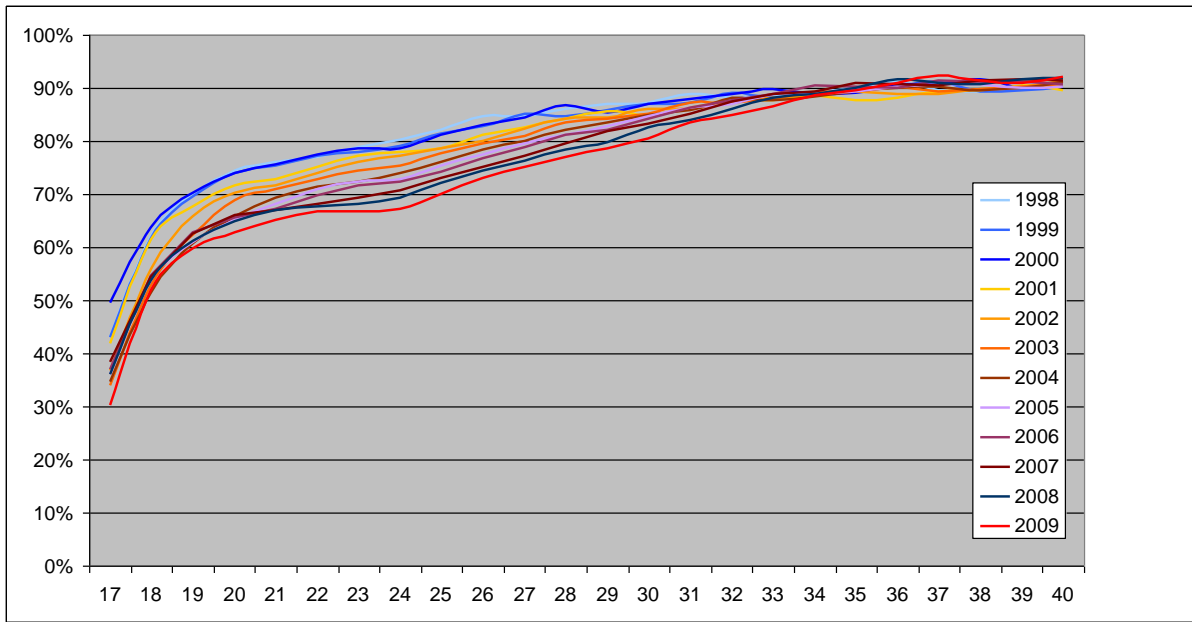
Figure 4 shows that in 2009 a much higher proportion of young people applied for their licence (60%) than in 1998 (50%), but Figure 5 shows that this has not translated into obtaining a provisional licence at age 17.

Figure 5 suggests that while in 1998 most learners transitioned to a provisional licence, in 2009, when 60% of 16 year-olds obtained a Learners permit, only 30 % of 17 year-olds had made that transition to obtaining a provisional licence. This is clear evidence for the impact of the GLS on slowing the transition to a provisional and full licence.

There are two more surprising findings in Figure 5. Firstly, it does not show a step change when the GLS changes were made – the shifts seem more gradual. The second is that the impact on the propensity to hold an independent licence extends beyond the mid 20s. It is not until the 30s that historical averages in licence-holding propensity are reached.

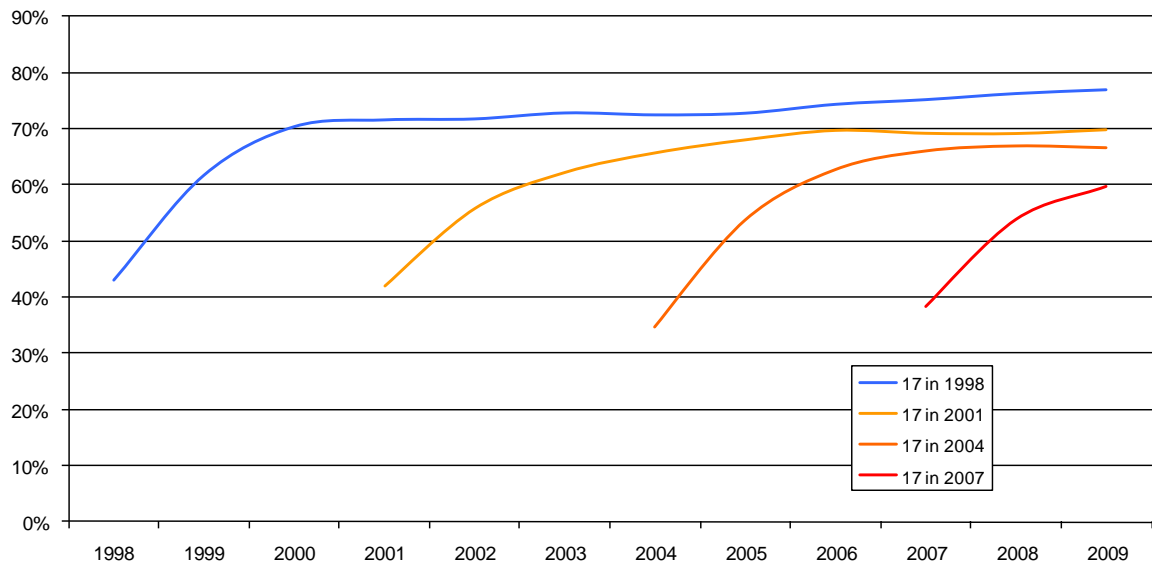
Figure 6 uses the same data in a different way, by following an age cohort from 17 years of age, and examining the growth in licence-holding for that same cohort as it ages. It shows that each subsequent cohort has a lower propensity to hold a licence.

Figure 5: Provisional and Full Licence-holding by age up to 40, NSW



Source: NSW RTA Driver's Licence Statistics and Australian Bureau of Statistics ERP for NSW

Figure 6: Licence-holding rates (Provisional and Full) for cohorts as they age from 17



Source: NSW RTA Driver's Licence Statistics and Australian Bureau of Statistics ERP for NSW

The first blue line in Figure 6 tracks the cohort that was 17 in 1998 through to the age of 28 (in 2009). Licence-holding for that group began with about 43% holding a provisional licence when 17, rising to 70% by 19 years of age, then increasing towards 80% during their 20s. Figure 5 shows that 28 year olds from earlier years of data had even higher levels of licence-holding than 28 year olds in 2009.

Each subsequent line in Figure 6 follows a cohort that is three years older. The cohort that is 17 in 2001 is the first cohort to go through the GLS. While it starts at similar levels to the 1998 cohort of 17 year olds, it does not appear to reach the same heights of licence penetration, with stabilisation at around 70% with licences during their 20s. Each subsequent cohort seems to be establishing an even lower rate of licence-holding, which potentially may

stabilise below the 70% mark. This contrasts with the 90% levels of licence-holding common in the 35-55 age groups (see Figure 2).

Two other factors with a potential influence on this trend are the zero tolerance to speeding for Learner and Provisional drivers under the current GLS, and the introduction in 2003 of a proof of age card as a substitute for a licence in some cases.

Figure 6 is clear evidence of a delay in obtaining independent licences by younger people, but it also suggests that even prior to the GLS, there was a dampening in the penetration of licence-holding in the younger population. The next section of this paper looks for other influences, and explores whether this phenomenon is unique to NSW.

2.2. Urban, economic and social influences

Is this phenomenon of lower licence-holding among younger people unique to NSW? An internet search reveals this trend has also been observed in Europe (Ruud and Nordbakke, 2005; Cedersund and Heriksson, 2006) and the United States (Wikipedia, 2010; Brown, 2010, Ireson, 2010). Brown (2010) indicates that teenage licence-holding in the United States peaked at 12 million in 1978, and has since declined, to around 10 million currently (despite growth in the size of the population). The reasons suggested for this are many, but the main one is economic. Higher levels of education, with associated college loans (or HECS debt in Australia), increase the likelihood of young adults remaining at home with their parent while education is completed and loans re-paid. The incentive to obtain a licence, which also costs money, is lower in this environment where money is tight and parents are available to drive young adults around.

2.2.1 Impact of economic pressures

An examination of Household Travel Survey data supports this theory for Sydney. Figure 7 shows the changing mode share by different age groups over the last two decades. It shows a decreasing reliance on driving a car by young people since 2001, and an increased reliance on being given a lift (car passenger) by this same 15-24 age group. This suggests that those without a driver's licence are substituting driving a car with getting a lift from someone.

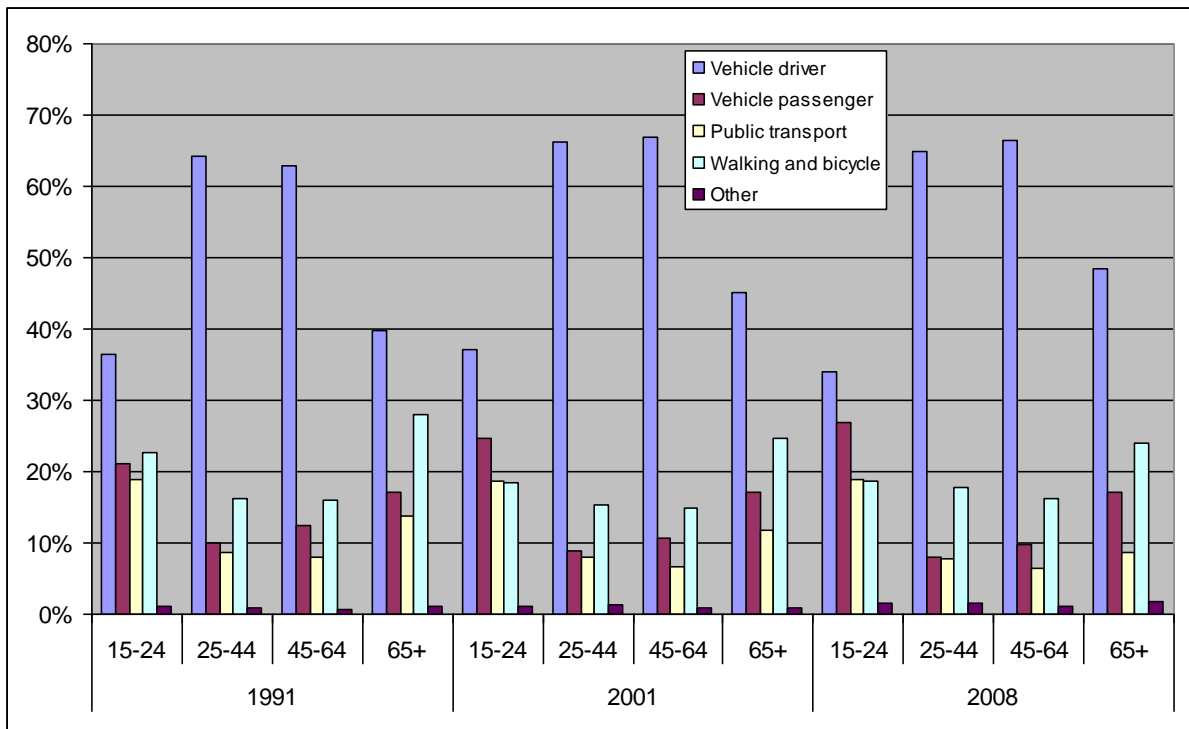
The evidence from the HTS does not show an increase public transport and walking however. These levels have remained remarkably similar over the last 30 years for young people, apart from a noted drop in walking by younger people between 1991 and 2001.

The ABS (2009) presented evidence of an increase in the number of young adults living at home over the last two decades. Over a quarter of adults 20-34 still live at home (from 2006 Census), growing from less than 20% in the 1980s. Money concerns where the main reason young people stayed or returned home in this period.

2.2.2 Impact of urban form

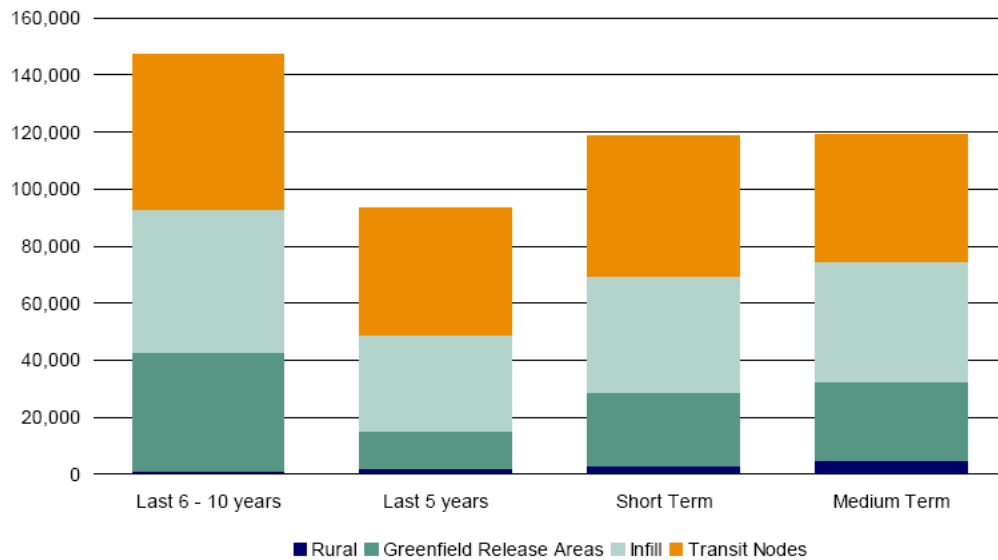
The last decade has seen, at least in Sydney, a shift away from fringe (greenfield) growth to more concentrated developments in existing urban areas. This has in part been policy led (urban consolidation), but has in part been due to market preferences for higher density inner suburban living (NSW Department of Planning, 2009). The outcome can be seen in Figure 8, which shows that over the five years to 2009, only 10% of development was in greenfield areas, a drop from about 30% greenfield growth in the previous 5 year period. Most growth has been evenly split between areas within walking distance of a public transport node, and the remainder of established areas.

Figure 7: Percentage Mode Share for all trips by age and year



Source: Bureau of Transport Statistics, Household Travel Survey, Sydney Greater Metropolitan Area

Figure 8: Focus of dwelling growth in established areas, last 5 years



Source: NSW Department of Planning (2009)

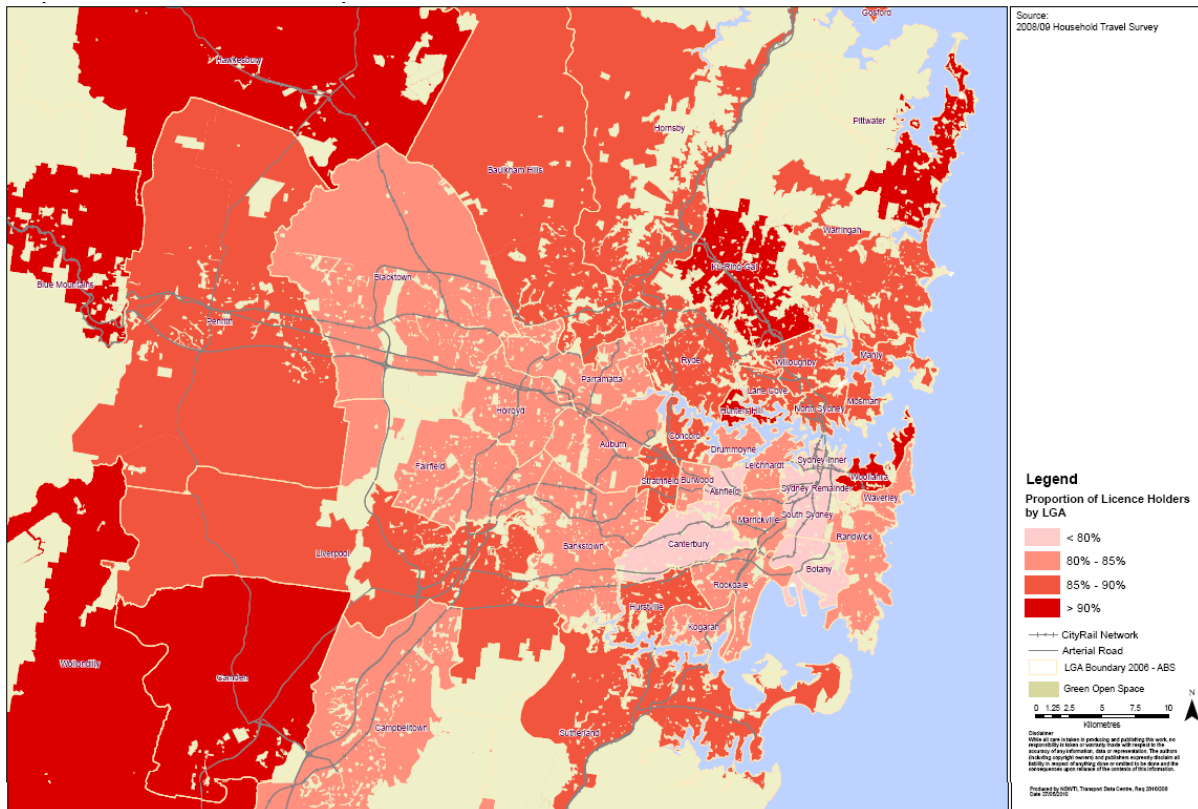
Data from the Household Travel Survey shows that people living in higher density inner-suburban locations have a lower propensity to own a car or hold a driver's licence. This data is mapped in Figure 9.

Sydney's growth over the last decade has been largely concentrated in the areas of comparatively low levels of licence-holding. The areas with the highest levels of licence-

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holding are the wealthy suburbs of the North Shore and Eastern Suburbs, and fringe areas where there is little alternative to owning a car if you want to access jobs and services.

Figure 9: Percentage of independent licence holders by LGA, Sydney, 2008/09 (age 15+)



Source: Bureau of Transport Statistics, Household Travel Survey, Sydney Greater Metropolitan Area, 2008/09.

Analysis of the HTS shows that among those eligible for a licence, but with no licence or a learner's permit, there has been an increase in living in high density flats or units since 2001. 36% of those without an independent licence lived in medium to high density dwellings in 2008/09, a rise from 32% in 2001. In the last 20 years, there has been little change in the dwelling preferences of licence holders, with about 80% in separate houses, and 20% in higher density dwellings.

This may point to part of the rationale for lower licence-holding among the young. These higher density suburbs generally have access to high quality public transport services, so there is less perceived need for a car to gain independent mobility. It may not be until child rearing age that the car, and therefore a licence, is required to maintain independent mobility. The outcome, in terms of travel behaviour, is a greater reliance on getting a lift, particularly in wealthy suburbs and in families with high car ownership, but a higher level of public transport use and walking and cycling among young people in less wealthy areas, or with lower levels of car ownership.

These findings suggest that the presence of more vehicles or other people in the household to do the driving is causing a lot of the non-licence holders to take the vehicle option, but as passengers, not drivers. This means that the delay in getting the provisional licence under current rules is not necessarily reducing vehicle use for certain groups. But for low income, group households and those with none or limited access to a vehicle, it is leading to more public transport use, walking and cycling.

3. Policy and planning implications and conclusions

The Graduated Licence Scheme has reduced licence-holding levels among young people in NSW. It is likely that the combination of the requirement for 120 hours of driving experience, and the increased costs, have deterred, or at least slowed, the uptake of licences by young people. This reduced exposure to risk will partially explain why the fatality rates per head of population are in decline. This would be a worthy topic for more detailed investigation, to tease out the impact of lower exposure versus additional driver training.

However, the trend towards lower licence-holding for young people appears to pre-date the introduction of the GLS in 2000, which only seems to have served to accelerate it. Evidence suggests that a trend towards urban consolidation in areas well served by public transport, coupled with the economic and social constraints imposed by higher education levels, is leading to fewer young people choosing to obtain a driver's licence.

School leaving ages have risen from 15 to 17 over the last two decades, and higher education is increasingly a necessity to enter the workforce. This means that entering the workforce is delayed for many until well into their 20s, and this is accompanied by a requirement to pay off a HECS debt for the education received. Evidence has been presented that a greater proportion are continuing to live with their parents during this period, a time when they are clearly less likely to obtain a licence, and to purchase a car.

A question that can't yet be answered is when this generation (Y) reaches the new child bearing ages in the mid to late 30s, will they be forced to obtain Driver's Licences to meet the mobility needs that parents of previous generations have desired. The role of other societal factors such as congestion and the communications revolution (eg social networking) as additional underlying reasons for the choices observed by young people is uncertain, but these influences may transcend the child-bearing ages, leading to a lower overall societal level of licence-holding.

Regardless, our transport modelling and transport planning needs to begin to adjust to this new paradigm of lower levels of licence-holding by young people. The increasing importance of public transport access to jobs, services, and local shopping opportunities are clear, and are already reflected in the NSW State Plan priority of improving public transport access to key major centres in the metropolitan region. There is also an opportunity for cycling and walking to play a much larger role in the transport task for this age group.

The changes observed in this paper should be viewed as a positive trend for road safety, for the environment, and for more liveable cities. These findings also acknowledge that the transport planner's toolkit is much larger than transport infrastructure and service provision. Education policies, licensing policies and communications developments are all possible contributors to this significant new trend, which may help us in our efforts to moderate the demand for car travel into the future.

Acknowledgements

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References

- Association of Independent Schools (2000) A new graduated licensing scheme for NSW, in *School Matters*, July 2000.
- Australian Bureau of Statistics (2009) *Population by Age and Sex, Australian States and Territories*, Catalogue No 3201.0, Canberra.
- Australian Bureau of Statistics (2009) *Australian Social Trends*, Catalogue No. 4102.2, June 2009
- Sydney Morning Herald (2008) *NSW's P-Plate deaths down after reform*, July 4, 2008.
- Brown, L (2010) <http://www.grist.org/article/u.s.-car-fleet-shrinks-by-four-million-in-2009/>, May 2010
- Ireson N (2010) http://www.motorauthority.com/blog/1025040_teens-no-longer-keen-to-drive-on-their-own August 2010
- NSW Department of Planning (2009) Metropolitan Development Program, briefing for Sydney Metro project.
- NSW Roads and Traffic Authority (2010) *Driver's Licence Statistics for NSW*, customised data request for Bureau of Transport Statistics.
- NSW Roads and Traffic Authority (2010) *Graduated Licence Scheme*, Learners page, www.rta.nsw.gov.au, May 2010
- NSW Transport Data Centre (2002) Sydney Strategic Travel Model Summary.
- Ruud A and Nordbakke S (2005) Decreasing licence rates among young people – consequences for local public transport, Institute of Transport Economics, Norway
- Wikipedia (2010) http://en.wikipedia.org/wiki/Driver's_license_in_the_United_States, May 2010