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Sustainable transport policy transfer to Australasian cities: Why are key innovations stymied?

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1. Introduction

Both Australia and New Zealand are missing out on parts of the sustainable transport revolution currently underway in parts of Europe, Asia and North America. Borrowing from the theory of policy transfer (i.e. Evans, 2009, Evans, 2004) this paper reports on a series of investigations into Australasian failures to adapt and innovate. Three innovations are used to highlight different problems that transport innovations are confronting in the Australasian context. The first of these is *light electric vehicles (LEVs)*, a class of vehicle available in Europe and regulated for low-speed use in urban environments, that offers significant advantages compared to, say, Australia's over-sized urban vehicle fleets. But many LEVs are classified as 'quadricycles' here, are prohibited, and face a daunting task to be legalized through labyrinthine institutional arrangements. Any rational manufacturer would baulk at trying to navigate these waters, let alone any local firm trying to develop home-grown versions. The second case is *low posted speed limits* in local streets. Low 30km/h / 20mile/h posted speed limits have now been adopted in much of Western Europe, most UK cities, and increasingly in North America. But this innovation is struggling to get any cut-through in Australia. Both *transit-oriented developments* (TODs) and *secondary central business districts* (CBDs) in metropolitan plans are also struggling to emerge, especially in regions such as SEQ. This contributes to the strong tidal flows on public transport networks, which in turn helps push public transport subsidies higher than cities with better urban structure. It also contributes to automobile dependence and our continued low rates of active transport. Can much be done to accelerate sustainable transport policy transfer to Australasian cities? Or are there structural reasons suggesting we will often be laggards?

2. Background

Policy transfer can be defined as "a process in which knowledge about policies, administrative arrangements, institutions, etc. in one time and/or place is used in the development of policies, administrative arrangements and institutions in another time and/or place" (Dolowitz and Marsh, 1996). In the field of urban transportation, it is clear that new urban policies are transferred across cities. For instance, the concepts and ideas for on-road busways first developed in Curitiba, Brazil, were adopted in nearby Bogota, Colombia, (*TransMilenio*) and have been transferred across continents to China (i.e. Guangzhou's BRT [中山大道快速公交试验线]), to Indonesia (i.e. *TransJakarta*) and to South Africa (i.e. Johannesburg's *Rea Vaya*), amongst others. In Australia and New Zealand, we tend to look to other developed nations for policy ideas that can help solve particular problems our cities are contending with. This can include a litany of policies that intervene in urban transportation systems, including new service models, new infrastructure arrangements, new funding and financing schemes, and regulatory changes. Examples of policy transfers of the past include the arrival of the four-step modelling approaches of the 1960s, that came from mostly US transportation planning consultants. From

the first Origin-Destination (O-D) Survey in Little Rock, Arkansas, in 1944, to the *Detroit Metropolitan Area Traffic Study* commenced in 1953, to the highly influential *Chicago Area Transport Study* (1960-63) the four-step approach was conceived and developed (Black, 1990). This rationalist approach was transferred to Australia and New Zealand, giving us the 'predict and provide' plans that ushered in the highway investments of later decades, such as the *Brisbane Transportation Study* (Wilbur Smith and Associates, 1965) and the 1965 De Leuw Cather & Co. plan for Auckland (see Gunder, 2002).

Transport agencies look abroad for new solutions, but often ones that are tightly bounded, rather than open and perfectly rational (Marsden and Stead, 2011). Their motivations will usually be to learn from experiences elsewhere, make sure not to 're-invent the wheel', then to apply them contextually to their own circumstances. At the same time, cities are ever more canny at self-promoting themselves and their 'successes', evidenced most clearly by the Bloomberg administration during and after it's rule of New York City (see Sadik-Khan and Solomonow, 2017). Civil servants play a key role, as previous work on the development of water transit and exclusive busways in Brisbane showed (Tanko and Burke, 2013, Tanko and Burke, 2015). But ideas are also transferred by transport operators, by road and construction lobbyists, by advocacy groups and charities, by academics, and by the consultariat (where most transport planners and engineers work these days as private consultants/advisors), both locally and abroad (Marsden and Stead, 2011). In Australia and New Zealand, the professional guilds/associations, play an especially important role.

Sometimes policy transfer comes from learnings in another sector outside transport, but in our field the transfer is usually from ideas developed and implemented somewhere else, such as the initial trials of trackless trams technologies in China, now happening in Dubai, Perth and elsewhere. In the last decades we have witnessed a set of policy transfers, mostly from Europe, the US and East Asia, offering a more sustainable set of urban policy options. Australia and New Zealand have not been backward in adopting many of these. Of the more successful examples, *New Urbanism* was transferred from the US in the early 1990s by 'missionaries' like J. 'Chip' Kaufman, an American who took up residence in Melbourne and was highly influential in the local scene (Morris and 'Chip' Kaufman, 1998). The movement was successful in replacing cul-de-sacs with the 'fused grid' street networks seen in master-planned greenfields estates across Australia and New Zealand today. *Tactical Urbanism*, which uses cheap, temporary interventions in the built environment, was rapidly embraced not just by civil society in our two countries, but by government and by developers, as a way to demonstrate the potential for change (Stevens et al., 2021). More recently, *e-scooter policies* were also rapidly adopted in Australia and New Zealand [with the very noticeable exception of Sydney]. Queensland was the first state to bring in the nationally agreed e-bike standards that now are common across the states and was also the first to legalise contemporary e-scooters for public and/or private use. The City of Brisbane first trialled and then improved their public scooter sharing system. A successful policy transfer, the Queensland and Brisbane learnings have, in turn, been influential in the design of city regulations across the Asia-Pacific. Even then, e-scooters are only a partial success. The state and city successes with micro-mobility, especially e-scooters, are hampered by a lack of Australian standards. States are left trying to regulate these vehicles, including their dimensions and safety features, via road rules. No other vehicle is regulated this way, and it is proving sub-optimal.

But there are numerous other sustainable transport policies that, using a rational perspective, experts in the field of transport would generally suggest should be transferred here. Many are yet to gain traction; others have had very patchy adoption in Australia and New Zealand. Some, like e-scooters, or a shift away from minimum parking requirements, are controversial, or come with negative consequences that cities have had to work through to mitigate. Others are far less

controversial, have proven benefits, and face other problems with their transfer. If we are serious about the transition to more sustainable, space-efficient and affordable transportation, understanding why these are 'stuck' is the first step towards helping such policy innovations arrive here and help fix our transportation woes.

3. Light Electric Vehicles

There is a class of vehicle that is starting to sell extremely well in European cities, that is extremely sustainable, very affordable, offers excellent door-to-door mobility, great weather protection, and can halve (or more) the amount of space needed for parking. It looks ideal for many inner-urban and small town contexts in Australia and New Zealand, but is prohibited. This class of light electric vehicles (LEVs), including such models as the Citroën Ami (see Figure 1) are speed-limited to very low top speeds (i.e. 40km/h), are fully electric, are very light and have much lighter battery backs, and charging times, than conventional EVs, and are half the cost (or better) than a small hatchback. They lack a lot of safety features (not good!) and are very basic, but in terms of space efficiency, sustainability and affordability, they provide a great accessible transport option for many. With the 50,000 production run of Ami's selling quickly in 2022, Korean and Chinese manufacturers have now announced they are to manufacture similar LEVs. But Australians and New Zealanders will not be seeing them here, unless something dramatically changes.

Figure 1: Two-seater Citroën Ami LEV

Vehicles such as the Citroën Ami, are prohibited due to Australian Design Rules (ADRs). Institutionally, it is going to be incredibly difficult to change this. Manufacturers and importers face the near impossibility of quickly altering the ADRs. They would need to work through, in total: *i)* the Strategic Vehicle Safety and Environment Group (SVSEG); and, *ii)* the Australian Motor Vehicle Certification Board (AMVCB); as well as, *iii)* the Technical Liaison Group (TLG); and, *iv)* the Infrastructure and Transport Senior Officials Committee (ITSOC).

Eventually they would need the agreement of *v)* the relevant Transport Ministers across Australia, the states and Territories and New Zealand. Bringing in "quadricycle" LEVs will likely need all these bodies to agree, then for the Ministers to vote. Which rational manufacturer wants to run that gauntlet, rather than run elsewhere to sell their limited stock in markets that are far more receptive? No circuit-breaker has yet been identified to adapt the ADRs for new vehicle types or to allow change given new circumstances. One needs to be developed.

4. Low default local street speeds

Australia and New Zealand are today in some dubious company in terms of the default street speeds of our smallest local streets. Saudi Arabia, Qatar, Chile, Australia, New Zealand…, all members of the club still holding on like drowning fishermen to 50km/h default local street speeds. We know why this is a bad idea. Australia's own *National Road Safety Strategy* (Infrastructure and Transport Ministers, 2021) is very clear:

> "There is an estimated 10 per cent probability of being killed if struck at 30 km/h, but this rises to over 90 per cent at 50 km/h"

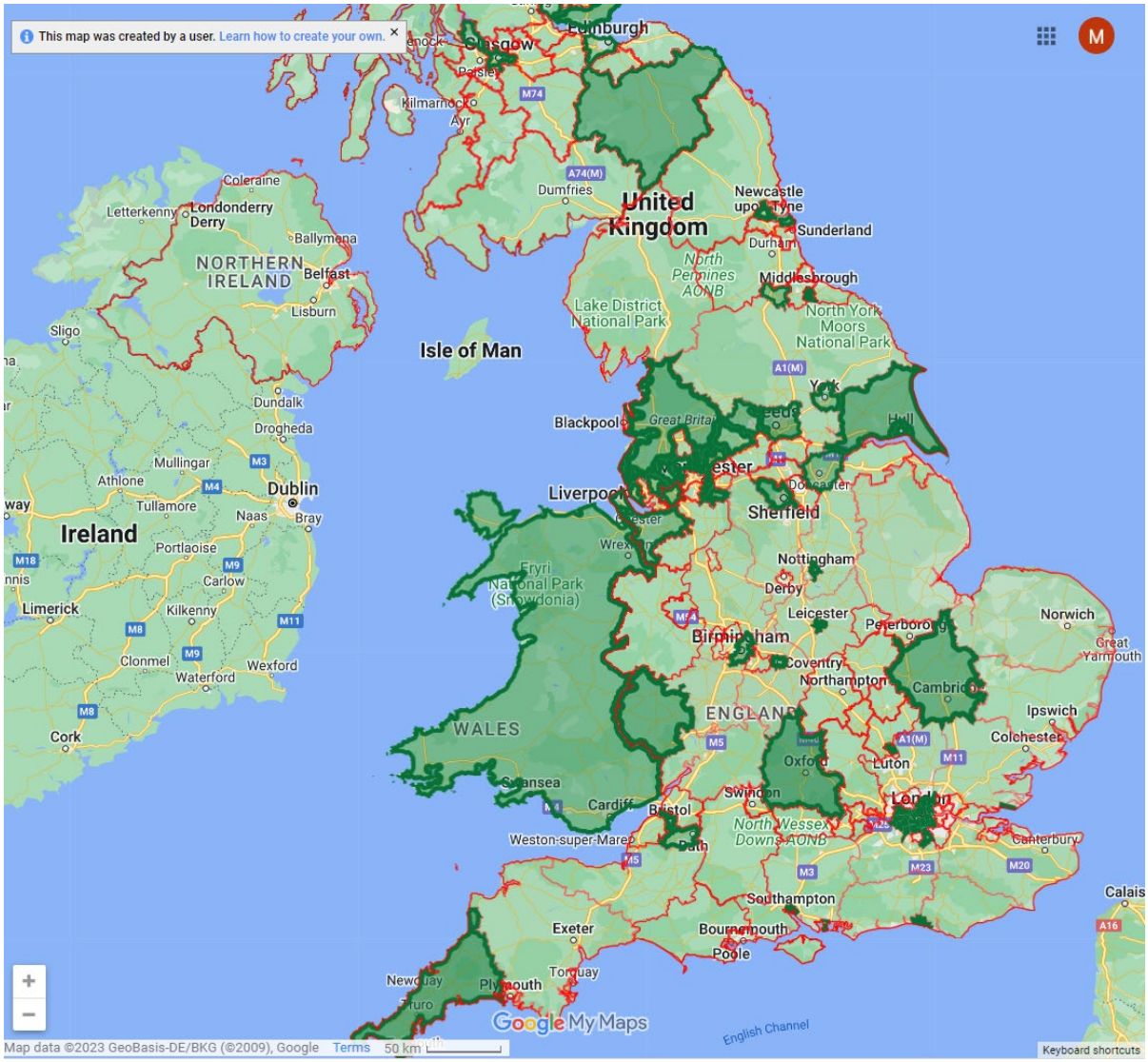
Road deaths have entirely disappeared in Spanish cities like Pontevedra that have reduced speeds and discouraged private vehicle use. Indeed, low posted street speeds are no longer controversial in most of the world, including Europe, East Asia, and North America. They are either the norm, or rapidly becoming so. The World Health Organisation helped broker *The Stockholm Declaration* on road safety in 2020 (see Hyder et al., 2022). It was agreed to by 130 of the world's transport ministers, including a commitment to introduce 30 km/h default local street speeds by 2030.

> Question: Guess which nation refused to sign?
>
> Answer: Australia.

The United Kingdom was also slow to adopt lower speeds. However, the *20's Plenty* campaign continues to map adoption of 20 miles/h (32 km/h) default speeds in the UK, demonstrating their trajectory towards full urban adoption (see Figure 2). London, Birmingham, Liverpool, Cardiff, Edinburgh and most of the other major centres have today all adopted these limits. The map gets greener every few months.

Canadian cities are on trend. Even US cities like Washington D.C. and Denver have adopted 20 mile/h local street speeds, with Washington now trialing 10 miles/h school safety zones. [Australian cities believe they are giving 'safety' to children with 40km/h in school zones; this may help explain why more than two-thirds of our children are driven to school]. A 2020 mapping exercise by We Ride Australia, using what are accepted in the rest-of-the-world as "low-stress" or "low-risk" cycling networks only included local streets if they were at 30km/h or less (Latz, 2020). The outputs angered state and local governments across Australia for daring to suggest there was almost nowhere really safe to ride in our cities, especially in middle and outer suburbia. But they were angered at the methods, not at their current street speed settings.

Figure 2: Locations with 20miles/h default street speed adoption (shown in dark green) in England, Wales and Scotland from the *20's Plenty Campaign* - April 2023



Chief Engineers and other senior bureaucrats in Australia are beginning to discuss a shift towards 40km/h, which would improve the situation, but place cities in an awkward half-way house. Not quite low-risk; still not getting cyclists, e-scooters and cars travelling at the same pace, removing all that urge for unsafe overtaking. There seems to be entrenched resistance to the 30km/h setting that goes beyond rational understandings, evidence of the benefits/costs, and lived experience of anyone who has visited Japan, or Germany or, today, much of suburban London. There are still learnings emerging for *how* to transfer this policy better. Recent trials of low street speeds without enforcement in Portland, Oregon, show that speed reduction and enforcement must be introduced concurrently (Anderson et al., 2022).

5. Transit oriented developments

Twenty years of TOD taskforces and TOD guidelines and TOD promotion has not translated into much in cities like Brisbane. If we speak first of TOD as-a-noun (not as a verb), meaning bespoke TOD developments in cities, the history of the 14-hectare Yeerongpilly TOD is a case in point. Situated next to a rail station just 7km as the bird flies from the Brisbane Parliament,

the project was first announced in the early 2000s, after the demolition of the nearby Tennyson Power Station. The Queensland Tennis Centre (home of Pat Rafter Arena) and an apartment tower were constructed and stood on their own from 2009. A new masterplan for the adjacent TOD site won a "*Hard Won Victory Award*" from the Queensland Division of the Planning Institute of Australia in 2015, given just how difficult it was to finalise (Diecke Richards, 2023). But then, nothing…. Only in 2023 are the buildings themselves arising on the site.

I suggest Queensland only 'selectively copied' what was necessary to achieve TODs and achieved no more than incomplete policy transfer (Marsden and Stead, 2011). By comparison, Perth, WA, had a far better policy transfer experience, and success, with TODs as-a-noun, helped by the Western Australian Planning Commission. They achieved early wins with sites like Subiaco (see Griffiths and Curtis, 2017). They learnt from abroad, appointed consultants to key studies, identified existing railway stations and prioritized opportunities. They created a cross-agency partnership to deliver. They did brownfields TODs and experimented with greenfields TODs, such as at Wellard. They even invested in research on TOD resident experiences, with the *Perth TOD Life Project* (see MapMySay 2023). Their intentions have been to put more pearls-on-the-strings of their rail network, and generate both ridership and bi-directional flow, which help reduce rail subsidies, and create a better city. But Perth is an oddity. As is the way of such planning movements, TODs are no longer the planning zeitgeist elsewhere in Australia, if they ever were.

More importantly, TOD as-a-verb, the more general process of making new urban development transit-oriented, has foundered on Australian shores. There has been concentration of activity, and more limited land use mixing, at many railway stations in Sydney and Melbourne. However, today's greenfields developments are still almost entirely car-based. A scan of the latest master-planned estates and planning submissions across our cities is revealing. Averley is outer Melbourne's latest automobile suburb, pinned on the Princes Highway near Pakenham, with its adjacent town centre deliberately placed away from the nearby rail line. In New Zealand, significant infill developments like the 4,000 dwelling Unitec Housing Estate in Auckland are also far from rail. Proposed developments on the city's outskirts, such as in Drury East, continue the orderly, but car-based expansion of housing along the Auckland Southern Motorway. No step-change in mode shift is likely to occur in our cities if suburban fabric is built this way.

Just as damning, regional plans across Australia have repeatedly called for new secondary central-business districts (CBDs). Outside Parramatta and perhaps Macquarie, in Sydney, these are mostly stymied by economic and practical reality (McCarney and Biermann 2016, pp690-692). The best attempts at market-led greenfields CBDs, such as Springfield Land Corporation's ambitious town centre south of Ipswich, have attracted university campuses and medical facilities, but have struggled to attract business headquarters and office tenants. Even at Springfield, the excellent rail station is just too far to walk to the office.

TOD as-a-verb faces a mixture of state and local government interface issues, economic feasibility, land assembly issues, and the threat of NIMBY land-holders. In Brisbane, existing heritage controls over pre-war housing prevent almost all the ideal TOD sites in the inner- and many middle-suburbs from any redevelopment. Further out residents where I live in Salisbury, are currently trying to prevent a very modest rezoning to 3-storeys for a frequent bus corridor through the suburb, and one tiny block of 8-storeys across from our railway station. They argue this is partly to preserve the 'character' of the post-war timber shacks, 1970s brick veneers, 1990s 'Tuscans' and the odd asbestos roof that characterizes the place. Maybe Australian cities will eventually transfer and adopt New Zealand's three-storey height limits across all their largest cities.

There is little excuse for the continuation of near transit-free suburbia across huge swathes of the city fringe, such as at Brisbane's Caboolture West. Across Australia and New Zealand, the land use planners and developers are leaving it to us transport planners, to our transport agencies and our budgets, to solve a slow moving fustercluck of their making. Again, a step-change in development patterns is needed, not least to help provide more affordable housing, which our current land development models have overtly failed to do.

6. Ways forward

The success, or otherwise, of policy transfer, is a very slippery thing to determine, with no set rules in the literature. There is no likely consensus except within the expertise of a particular field-of-research as to what has transferred well, and what hasn't. One might debate my conclusions about where Australasian cities sit in terms of adoption of sustainable transport policy. But there are clearly problems. There is likely a reason Australia has produced so many 'activist transport academics' over the years, whether in sustainable transport, in public transport, in active transport, and related sub-fields.

I suggest there may be a number of reasons Australia and New Zealand may be hamstrung in terms of sustainable transport policy transfer beyond those identified above.

- We have no unified transport conference or single institution, that brings the practitioners, operators, academics and civil servants together, in the ways the US *Transportation Research Board – Annual Meeting* does. We need one major gathering where we all come together.
- Key actors that should be driving policy transfers, like the Australian Road Research Board, did not adapt to the world of sustainable transport and are struggling to do so today. It is heartening to see them finally change their name, signaling a shift in this direction, but it's just a name-change at this point in time.
- Our universities have often performed well, evidenced by the iMOVE CRC. But the endless cuts to university funding must inevitably take their toll and there are fears for what comes after iMOVE. The transport research community needs to gather and plot what comes next, and how we can maintain and build capacity in this region.
- We are strongly Anglo-spherical in our outlook, mainly looking to initiatives from the US and the UK, or from each other ("across the ditch"). Our engagement with Asia on transport remains poor. There is much that could be transferred from Asia to Australia, whether that be the travel demand management and pedestrianisation approaches of tourist towns like Hoi An in Vietnam, to the learnings from Indonesia's new world class metros and high-speed rail lines.
- Finally, Australia (unlike its neighbour) is an especially risk-averse and litigious nation, launching more litigations per capita than citizens of the USA each year. Its transport institutions reflect this cultural reality. There is, however, some increased appetite in local and state governments for small-scale and low budget trials, under the rubrics of tactical urbanism, and this should be encouraged.

There are ways to resolve most of these issues, but they will require both sweat and a desire to change.

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