

Why autonomous vehicles won't reduce our dependence on cars in cities

December 4 2018, by Jennifer Kent



Credit: AI-generated image ([disclaimer](#))

The technology of autonomous vehicles (AVs) is progressing rapidly, but have we really [thought through](#) how they'll work in reality?

In its report on AVs in Australia, Austroads (the association of Australasian road transport and traffic agencies) paints both [positive and](#)

[negative scenarios](#) for the future.

The positive scenario suggests that AVs could reduce car ownership and use thanks to a fleet of shared and connected AVs. These AVs would roam the city, filling in gaps in the timetables and fixed routes of a superior and cheaper public transport network.

But for this scenario to work, AVs must be shared and not privately owned, and they must complement a robust public transport system that accommodates most trips. These mechanisms are either weak or nonexistent in most Australian cities, suggesting it's unlikely the arrival of AVs will reduce our dependence on private cars.

Are Australians willing to share their cars?

In 2013 I spoke to a group of car owners working in suburban Sydney, who used their cars to juggle multiple time commitments to family, sport, late nights at work and secondary employment.

They saw their cars as spaces of climate-controlled comfort, where they could have time alone, away from busy lives. Participants also expressed a strong belief that Australians have a basic right to be comfortable, protected and autonomously mobile.

No matter how well technology matches rides for us, the reality is a shared AV system will introduce a source of wasted time for users – minutes waiting here, a block or two to walk. Not to mention the need to physically share space with strangers.

This compromises the privacy and autonomy currently associated with car use. Australians who are accustomed to the comforts of their own car will likely fight to retain what they believe is their right.

Is public transport good enough?

If AVs are to reduce car ownership and use, we will need to drive less than we currently do. This requires access to useful and reliable alternative transport options. Yet for many of us, access to public transport remains a luxury: we are car dependent because we have little choice.

Often, public transport isn't available for those who need it, and even if it is available, it doesn't accommodate the messiness of life.

It isn't there for the people who need it

In 2016, I analysed [data from more than 300 newly arrived residents](#) of Oran Park in the southwest of Sydney. While the newly developed precinct can be navigated by bike and on foot, the car is a necessity when residents need to leave the neighbourhood.

One common reason to travel outside the precinct is for the journey to work. More than 65% of residents do not work within the local government area, let alone within walking distance of the neighbourhood. Even for those who do work in the locality, more than 95% travel to work in a car because the options to travel by alternative modes are limited to an infrequent and indirect bus service.

Residents are condemned to car-dependence, regardless of whether that car is an AV or not.

It doesn't accommodate the messiness of life

At present, our public transport systems assume that all we do are predictable trips. Our timetables, routes, rules and even the internal

layout of our trains and buses, are all designed for people travelling to and from work.

But in reality our transport practices are messy. We pick up groceries, cart children around, and visit dispersed family and friends. Even though we may be able to catch the train or bus to work, we struggle to use public transport for other important, but messier, trips.

Take, for example, the trips we take with pets. In 2016, I collected data on the transport habits of 1,257 Sydney dogs and their owners.

People travel with their dogs to various locations – dog parks, beaches, cafés and the vet. And because dogs are restricted on public transport in Sydney, these trips are usually by private car.

This restriction epitomises an overall approach to public transport provision that relies on people having access to a private car. In Australian cities, the car facilitates real life, and public transport is for the journey to work – if you're lucky.

While [public transport](#) remains marginalised in policy and practice, private cars will continue to dominate the way we travel.

AVs could increase the amount we drive

The real concern is that, unless regulation is allowed to intervene, the arrival of AVs may actually herald an increase in the amount we drive. Here's why.

Australia's [transport](#) planners currently have two ways to temper car use: parking regulation and traffic congestion. It seems Australians have a phobia of sitting in traffic and not finding a car park.

But AVs could immobilise these tools.

First, parking. AVs don't need to be parked nearby to their rider, they can go off and park themselves wherever there's a free space. Picture the scenario of someone currently driving 10km to work each day and paying \$10 to park.

In the world of fully [autonomous vehicles](#), they would inevitably opt to save that \$10 per day and have their car drive them to work, drop them off, take itself home, only to return when the driver summons it at the end of the day. That makes a 20km day a 40km day. And imagine that for the millions of households across the city.

Second, congestion. AVs will ensure that time in the car is more pleasurable and useful. Being stuck in a traffic jam might not be such a pain if you could be working, reading, watching a movie, having a coffee with friends, playing with the dog, or starting Friday night drinks early.

So, when considering the impact of this new era of the car, we need to be [cautious](#). The automotive industry is powerful. It creates a product that is cemented in our cities, economies and our lives. Its survival depends on growth. We need to be prepared for AVs to strengthen, rather than replace, the status quo of [car ownership](#) and use.

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