

The Cost of Congestion

"Urban congestion is tipped to cost the [Australian] economy \$20 billion a year by 2020, but Australians are still reluctant to use public transport, a new study shows. Many Australians do not view public transport as a viable alternative to car travel, with 90% of all trips taken in private cars. A nationwide survey commissioned by the lobby group National Transport Commission (NTC) found that people support improvements to public transport, with most fearing road congestion will continue to worsen. But the research shows most did not want to pay more to upgrade the transport system and consider it a matter for government. 'Our research found that Australians have very little knowledge about the way that the transport system is funded, or about pricing models that operate overseas', NTC chief executive Nick Dimopoulos said. ... Travellers wanted more frequent public transport services, new routes and better roads. ... Employees stuck in traffic and away from the workplace would account for some three-quarters of the anticipated \$20 billion congestion cost, the NTC said. Higher operating costs for vehicles and increased air pollution are also expected to contribute to what would be a major drain on the economy."

Ref: AAP, Herald-Sun, 19/9/11

Air New Zealand Pounces on Virgin

"Air New Zealand has taken advantage of Virgin Blue's falling share price and lifted its stake in the company. Air NZ has increased its total holding in the company by 5% to own almost 20% of the Australian-based airline."

Ref: ABC News, 27/9/11

The End of Garbage Trucks?

"Under its 2030 plan to make Sydney more sustainable, the council plans to slash energy use and the lord mayor, Clover Moore, said the waste strategy aimed to reduce significantly the amount of waste going to landfill. The sustainability director, Chris Derksema, said underground vacuum systems were used to service 1.3 million people in South Korea and had been installed in Barcelona to make the streets more liveable by removing rubbish bins and garbage trucks in narrow lanes. While it was possible to retrofit the underground systems in existing buildings, it was easier to install them on new projects such as one at Wembley in England which serviced thousands of new homes, he said."

"The massive urban renewal project at Green Square was suited to the new system and Mr Derksema said the city had negotiated in-principle support from the developers to design their buildings to accommodate the system if it backed the technology. The council was conducting a feasibility study at Green Square on the cost benefits. The city is pushing to expand light rail and is encouraging the construction of trigeneration plants to power and supply hot water to several city buildings. Mr Derksema said it made sense to consider installing waste pipes when other trenches were dug. Cr Moore said the vacuum systems worked overseas and would eliminate the noise of garbage trucks in Sydney in the early morning, reduce waste and greenhouse gas emissions. 'They look just like a typical apart-ment building garbage chute [but] ... the chutes are vacuum sealed and instead of emptying into open bins in the basement, the rubbish is sucked down to a central collection point', she said."

Ref: Matthew Moore, SMH, 19/9/11



**Underground Garbage Vacuum System:
Inaugural Trial**

Electric Vehicle Charging Stations in the US

"Electric vehicle charging station developer 350Green ... has agreed to purchase and install more than 400 charging stations across the [US], powered by the ChargePoint Network, further growing the largest network of independently-owned charging stations."

Ref: Traffic Technology Today, 26/9/11

And Also ...

"Green power does not rank in [Republican] calls for American energy independence – predicated on more drilling for oil and gas. Most want fewer environmental constraints on industry and reject grants for green projects. The Minnesota congresswoman Michele Bachmann, a Tea Party favourite, has pledged to do whatever it takes to get petrol back down to \$US2 a gallon (A\$1¢ a litre). It is currently at \$US4.30."

Ref: Simon Mann, SMH 18/9/11

Generated Traffic Impacts

"One factor that complicates [the analysis of Congestion Costs and Reduction Benefits] is that traffic congestion tends to maintain equilibrium: it grows to the point that congestion delays constrain further peak-period vehicle trips, causing travellers to shift to alternative times, routes and mode, and forego lower-value trips. For example, when roads are congested you might choose a closer destination or defer a trip until later, but if congestion is reduced you make those peak-period trips. Similarly, when considering a new home or job you might only consider a 10 mile commute if roadways are congested, but up to 30 miles if roads flow freely."

"This has important implications for congestion evaluation. It means that:

- *Congestion seldom gets as severe as predicted by extrapolating past trends. As traffic congestion increases it will discourage further peak-period traffic growth, leading to equilibrium. A do nothing option will not really lead to traffic gridlock (conditions where traffic becomes totally stuck for hours).*
- *Capacity expansion provides less congestion reduction benefits because the additional travel tends to be filled with generated traffic (increased peak-period vehicle travel, including shifts in time and route).*
- *Capacity expansion causes induced travel (increases in total vehicle mileage) which increases external costs including downstream congestion (expanding highway capacity tends to increase surface street traffic congestion), parking costs, accidents, energy consumption, pollution emissions and land use sprawl.*
- *The additional vehicle travel provides direct user benefits, but these tend to be modest because the additional vehicle travel consists of lower-value mileage that users are most willing to forego if their travel costs marginally increase."*

Ref: Todd Litman, Smart Congestion Relief, 3/9/11

Full Report: http://www.vtpi.org/cong_relief.pdf

How Road Capacity Expansion Generates Traffic

"Traffic grows when roads are uncongested, but growth rates decline as congestion develops, reaching a self-limiting equilibrium. If capacity is added, traffic growth continues until it reaches a new equilibrium. The additional peak period vehicle travel that results is called 'generated traffic'. The portion that consists of absolute increases in vehicle travel (as opposed to shifts in time and route) is called 'induced travel'."

Ref: Todd Litman, 3/9/11

Generated Traffic

"Almost 40 yrs ago when I began research for my PhD (published in 1975 by Friends of the Earth as 'The Politics of Urban Transport Planning') almost everyone with half a brain knew that you couldn't solve urban transport problems by building big new roads. Anthony Downs' paper from 1972 – 'The Law of Peak Hour Expressway Congestion' – explains why: new big roads generate traffic until they become so congested speeds reduce to the level of the 'before' situation (or lower). Road planners refuse to accept this reality, and continue to persuade politicians they have no option but to build (and be seen to open) these major projects."

"It is not surprising that here in Victoria (or elsewhere in Australia) I have never seen or heard of any study that examined the original planning 'case' for a new major urban freeway (with all its traffic forecasts and CBR calculations) and then tested these forecasts against what happened in practice a few years after the opening of the new road. The answer, of course, would be that the road stimulated new development and car use, and that a widening was on the cards within a few years. Spending billions on roads leaves little in the transport budget for public transport, which reduces its competitiveness, pushing more people into cars they can't really afford. A Minister for Transport once told a meeting that a proposed new freeway (I forget which one) 'would add \$400m to the economy of the state'. I asked 'does that mean if we pave the whole state we will all be millionaires? I'm still waiting for the answer. In the meantime let's test a few major freeway projects of the past to see if they achieved what they promised. If they didn't, then how can we have confidence in the planning method and models and the people who propagate them?"

Ref: John Grant, 21/9/11

"It would not be difficult to go back to the original forecasts for a new road that was built and see if the road actually delivered what was promised: How long did congestion relief last? Did the road attract more traffic than was forecast? Did it induce development that created more traffic? How accurate was the original cost-benefit forecast? Road proponents don't want to know the answers to these questions – because they suspect their models will be proven wrong. We have known for decades that no city has ever built it way out of congestion and that the more roads you build the worse it gets. They just don't want us to know this and that is why no post-build assessments have ever been undertaken."

Ref: John Grant, 2008

Melbourne Strategy Submission (Part 6)

Here are some excerpts from my comments on the 2011 Melbourne Transport Strategy:

"Buses like taxis are an important and essential part of the transport system but, like taxis, are problematic in the CBD in so much as they often:

- *'Run blank' (or 'dead') ie without passengers while getting to their starting points or leaving their finish points;*
- *Often carry less than five passengers, particularly outside the peak hours (with the exception of the Smart Buses and specialist services like the Melbourne Airport services).*
- *Run on fossil fuels.*

"Part of the problem is that most bus routes are not legible to the general public many of whom – visitors to Melbourne apart – have a mental picture of schematic maps of both the wider Melbourne tram and train systems. The schematic map of the wider Melbourne bus system would not be familiar (though regular users of particular buses would be familiar with their routes). Of course the train and tram routes are essentially radial and somewhat easier to describe diagrammatically whereas the buses provide the important cross-city routes and rail connection services (arguably where their resources should be concentrated). Trains and trams have the critical advantage that the iron rails and – where trains are electrified – overhead power cables essentially 'mark the route'. As long as the rails are not rusty, you can be reasonably sure that tram or train will come along sooner or later. Such confidence attracts more patrons, which means better public safety.



**Part-Time Bus Lane,
Lonsdale Street, June 2011**

"Electric (trolley) buses, as used in Wellington NZ, and Seattle in the US – cities which have introduced modern versions to up-grade their fleet, presumably having demonstrated to themselves that these are a desirable mode of public transport – have an overhead power cable system. Either iron rails or overhead cables (or both) provide a significant advantage to encourage both public transport patronage and active transport through legibility."

"The work with the Smart Bus Routes is to be applauded as are the priority bus lanes but the transport patron is not filled with confidence when, for example, standing in Lonsdale Street they see cars parked in those lanes."

"The question is: are there bus routes in the Melbourne municipality that would be appropriate for a trolley bus system? Perhaps the #401 route between North Melbourne Station and Melbourne University?" {Continued in #219}
Ref: Stephen Ingrouille



**Trolley Bus in 'Bus Only Lane',
Wellington, December 2008**

And Also ...

"After driving for half an hour I found myself in a different country, inhabitant mostly by caravans. They were wallowing towards the sea in monstrous shoals, decked out in curtains of orange and brown and window stickers commemorating past migrations."

"Groups of them rested in the parking areas by the side of the autoroute, shimmering with heat. Their owners, ignoring the open countryside behind them, set up picnic tables and chairs with a close and uninterrupted view of the passing trucks, and within easy breathing distance of the diesel fumes."

Ref: Peter Mayle, A Year in Provence, Pan Books, 1989

Fairness in a Car Dependent Society

"Our car dependency in the UK is contributing to substantial and persistent inequalities. Whilst people have benefited from the availability and affordability of car travel for instance by accessing a wide range of education and employment opportunities and goods and services these freedoms have been obtained at a substantial price, and one that falls most heavily on the poorest and most vulnerable in society. Our society has become hard-wired to increasing levels of car dependency so much so that many services are now based on the assumption that users will access them by car so people who do not drive or cannot afford to drive find themselves increasingly trapped in a car-dependent world, unable to participate in the benefits, but forced to endure its costs. Some of society's most vulnerable groups – including children, the elderly and people in low-income groups – are most likely to be affected by the negative effects of increased road traffic in the UK, while having least access to transport themselves."

"Key Findings:

- *In the lowest income quintile, less than half of adults hold a driving licence and less than half of households have a car whilst half of all households in the highest income quintile have two or more cars. For those claiming income support or jobseeker's allowance, car access figures are even lower – almost two thirds do not have access to a car and a licence to drive it*
- *those in the top income quintile travel two and half times as far as those in the bottom income quintile and three times as far by car*
- *The richest 10% of the population benefit from receive four times as much public spending on transport as the poorest 10%.*

- Car owners in the lowest income quintile spend 25% of total household expenditure on motoring (by comparison spending 10% of income on household energy bills is defined as 'fuel poverty'). People living in rural areas now see car ownership as a necessity and around 90% of households have at least one car. The cost of motoring was found to account for 60 to 100% of the additional income calculated as being required for rural dwellers to meet a minimum socially acceptable standard of living commensurate with urban dwellers.

- SDC estimate that the total cost of our level of car dependency significantly exceeds the £48 billion per annum in taxes and charges on UK road users.

"The Commission is calling on the Government to re-prioritise its transport policy to put fairness at the heart of decision-making. The report recommends a new approach to transport policy in line with the Coalition Government's commitment to fairness as one of its three guiding principles. The Commission's recommendations centre on its Transport Hierarchy for policy makers, calling on policy-makers to prioritise reducing the demand for transport; encouraging more sustainable modes of transport and improving the efficiency of existing modes of transport over increasing the capacity of the transport system.

"Recommendations:

- The Government and the Devolved Administrations adopt this over-arching transport hierarchy approach and promote its use at all levels of transport decision-making as a tool to ensure that the most sustainable and fair transport solutions are prioritised.
- The Government and the Devolved Administrations should improve the handling of social and distributional impacts in transport decision-making and appraisal. Changes made should be monitored to assess whether they are leading to fairer outcomes.
- In order to tackle unfairness in society, the Government and the Devolved Administrations should make reducing transport inequalities a specific goal of transport policy."

Ref: UK Sustainable Development Commission

www.sd-commission.org.uk/pages/fairness-in-a-car-dependent-society.html

Steam Powered Car

"The 1884 De Dion Bouton et Trepardoux Dos-a-Dos Steam Runabout has a history almost as long as its name. The steam-powered vehicle has passed through just four sets of hands since it was built, and one of the owners held on to it for 81 years. A participant in the world's first automobile race in 1887, the De Dion reportedly managed speeds of about 60km/h (on the straight). ... The diminutive De Dion measures just 2.7 metres in length – about the same size as a Smart car – and seats four people 'dos-a-dos' (back-to-back). The seats are positioned above a 150-litre water tank that feeds two compound steam engines. A tank of water is good for about 32 kilometres of travel, while its multi-fuel boiler can use either coal or coke."



Photo: The Age

Ref: Matt Campbell, The Age, 26/9/11

Health and Public Transport

"It sounds like a lazy way of getting around but catching public transport can boost your fitness, researchers claim. Commuters who catch public transport to work in the UK walk about 480 km per year to and from bus stops between their homes and their offices, the research says. University of Sussex's Dr David Lewis said the study demonstrated that using public transport instead of a car could enhance a person's health. She said people who walked to their bus stop or train station each day could cover the equivalent of 11 marathons a year."

Ref: mX 12/9/11

And Also ...

"Train announcement: 'I know the sign on the platform says we're terminating here, but I'm telling you, I'm taking this thing to Belgrave'."

Ref: mX 14/9/11

Asia's Hyper-Motorization (Part 2)

"Most national and local governments in Asia have embraced development that favours the small minority in cars, to the detriment of the sizeable minority on motorcycles and the majority still walking, peddling or riding buses. This American-style development, in which individuals outrun collective transport, rarely gives alternatives a chance. Through what amounts to a vicious cycle, each family has an increasingly strong incentive to acquire individual means of transport, which clogs the streets and pollutes the air even more. Those left behind move ever more slowly. Increasingly, the real costs of transportation are imposed on the majority by the minority. The urban landscape evolves towards even more car-oriented development and urban transport becomes unsustainable."

"Sustainable transport is not merely a throwaway phase. The World Bank defines three components of ST – social, economic and environmental sustainability. In simple terms, the United Nations' definition of sustainability calls for not passing on real costs and damages (what economists call 'externalities') to others or to future generations – this includes damage to present generations in the form of high death rates from air pollution or road accidents or harm to future generations in the form of CO2 emissions. But even the direct costs of building roads or other transport facilities, particularly in congested areas, are not currently passed on to those who use the facilities. In a sense, Asia has learned from the US how to create a kind of automotive Ponzi scheme, in which roads are built, and when they fill up, more roads are built, without making those who need and use more road capacity pay for that capacity."



Bangkok's Central Expressways

"As the roads have multiplied, it is easy to see how the city is being buried beneath them".

Photo: Narong Sangnak/EPA; Ref: World Streets

"Transport can only be sustainable if governments develop rules for both travellers and the transport industry, define the economic boundaries through licensing and other means so that private and public operators can run safe, clean and fast collective transport systems, and enforce safety and environmental standards. Through most of the 1990s and the early part of the past decade, governance in this area was lacking. This was particularly true where common sense would call for higher fuel prices, measures to limit individual vehicle use in very congested areas, standards on emissions and fuel quality and, equally important, access to public transport for poor and non-motorized middle-class citizens."

"What is the worst of these 'externalities' depends on who you are. I met a businessman from Jakarta once who was incensed that the city had taken away lanes from car traffic to permit exclusive bus traffic, arguing that his time was valuable, and implicitly that the time of the hundreds of thousands who move rapidly on the TransJakarta Busway had no value. He, riding in his air-conditioned car with a driver, breathes better air and has better accident protection than the vast numbers of motorcyclists, bus riders, pedestrians or brave souls on bicycles. And anyone who has tried to cross Jalan Thamrin in central Jakarta during the day knows how difficult it is to walk even in the 'nicest' parts of the city. My friend aside, the worst burden of unsustainable transport falls on the poor and lower middle class, not because of their direct expenditures, but because of the larger costs to their health, safety and time."

{Continued in #219}

Ref: Lee Schipper, World Streets, 3/8/11

<http://worldstreets.wordpress.com/2011/08/03/car-crazy-lee-schipper-on-the-perils-of-asia%E2%80%99s-hyper-motorization/>

Electric Carshare in Montreal

"In a Montreal parking lot, Jean-Francois Beauchamp unhooks a power cable from his [carshare vehicle] and cheerfully drives away, an enthusiastic user of a new service that is finding fans in equal measure among commuters and environmentalists. 'It's very quiet, pleasant and doesn't use gasoline',

says Beauchamp, 44, a web designer and frequent user of the electric cars made available for hourly rental by the Communauto car-sharing enterprise. His loaner vehicle is one from a fleet of gasoline-free cars pointing the way forward for the increasingly popular car-share industry, which unlike a traditional car rental, allows customers to hire a vehicle for part of one day.

"The Montreal-based Communauto, the oldest car-sharing company in North America, in mid-August launched the pilot project with 50 Nissan Leaf vehicles, hoping to become an industry leader of the electric loaner cars. Communauto is also a bargain, charging about two dollars per hour, which includes the cost of fuel – plus a subscription fee. Electric cars early on met with consumer resistance, but the chance to try out the vehicles in a low-risk car-share has helped to greatly increase their popularity. 'I already have a car, but I subscribed to Communauto precisely because I wanted to try out an electric car', said new convert Georges Charlebois. ... The most ambitious electric car-sharing plan is wildly popular, but has a downside, Beauchamp admitted. 'You have to plan ahead because you can't stop at a gas station to fill it up', he said ruefully. Communauto has tried to alleviate that problem, installing – in partnership with the giant public utility Hydro-Quebec – car charging stations in parking lots all across Montreal. Devoid of a conventional combustion engine, the [carshare vehicles] – emblazoned with the slogan '100% electric' – are famously quiet, so not only do they not increase air pollution, but they don't add to the city's noise pollution, either. Most of the electric cars can go about 140 kilometres before needing to be recharged – although the batteries become partially replenished when the brakes are pressed, or when the vehicle is driven downhill.

"Benoit Robert, CEO of Communauto, told AFP that the company is excited about the addition of the green cars to its fleet. 'The electric car will allow us to further reduce emissions from our users', he said. The popularity of the vehicles already is having an ecological upside, he added. We already are having a significant impact on reducing the rate of motorized car use by the population and this has a direct impact on reducing greenhouse gas emissions', Benoit told AFP. Catherine Morency, a professor at the Ecole Polytechnique in Montreal, said the program is a marketing masterstroke because of the synergy between the carshare and green car industries. The arrangement also is a plus for manufacturers of green automobiles, because a wider range of renters – and potential purchasers – try out the cars before purchase. But the two industries part ways in terms of their long term goals: While makers of green cars are hoping to put a lot more of them on the road, Communauto seeks, in the end, to reduce the number of cars in circulation. Car-sharing will convert at least some motorists to the electric car, thereby increasing the demand for these vehicles, predicted popular automobile columnist Denis Duquet. 'The production will increase, prices will drop and people who have used the electric car in Communauto are likely eventually to buy their own', Duquet predicts."

Ref: AFP, Ninemsm, 19/9/11

Recycled Roads

"As part of the Recycled Roads to Zero Waste project to increase the use of recycled material in road construction, the Surf Coast Council [in Victoria] investigated using recycled concrete to replace the traditional quarried rock in the sub-base section. A local source in Geelong, Regional Recycle, could produce material to the VicRoads specification and was 22% cheaper than the quarried rock. 'Once we started construction, the material was a very consistent quality and our works crews found it easy to work with. It compacted well and has performed exceptionally as a sub-base. The one problem we faced was ensuring supply could meet our demands. We required about 1600 tonnes but could only obtain 900 tonnes locally', said Peter McLean, Manager Engineering Services, Surf Coast Shire. The Surf Coast Shire is committed, where possible, to using recycled concrete as a replacement for the traditional quarried rock and working with the regional waste management group and local recyclers to meet future demands."

Ref: Resource Smart Business News #31, Sustainability Victoria, 19/9/11

And Also ...

"Southern Californian officials have said they are paving over a strip of road grooved by a car maker to play the William Tell Overture when vehicles drive over it at 88 km/h. Neighbours complained the road music is a high-pitched drone that keeps them awake at night."

Ref: The Age 22/9/08