Lies, Damned Lies, AV’s, Shared Mobility and Urban Transit Futures

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Introduction
The End
The Great AV Lie
The Great Shared Mobility Lies
Why Transit?
Transit Fusion
This session considers urban transit futures in a changing world

- It aims to:
  - consider how “new mobility”, “autonomous vehicles”, “shared mobility” and “ride sharing” is going to impact urban transit
  - Explore the future case for Urban Transit systems
  - Look at some new and interesting developments in the field

- It is going to debunk fallacies being promoted about new mobility and transit using:

**New words**

Source:

A major focus is LIES and DAMNED LIES!

"There are three kinds of lies: lies, damned lies, and statistics"
Mark Twain or Benjamin Disraeli (Velleman 2008)

- famous "Benjamin Disraeli?" quote on ‘lies, damn lies’;
- In trying to find a source to cite, I found no known attribution to Disraeli
- Many think Mark Twain might be the source.
- Isn’t this impressive! ; a foundation stone of thought about ‘the truth’ may indeed be a lie;
- perhaps this is a prophetic way start to this paper about transit futures?

Source:
…and is structured as follows

The End  The Great Autonomous Vehicle Lie  The Great Shared Mobility Lies  Why Transit?  Transit Fusion

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**New Word** Definition:

"Auto-no(e)motion" is the unscrupulous use of the concept of the autonomous car by technologists to assert that the driverless car will solve all the world's mobility problems, so that we can get rid of urban public transport which is a bad and should have been got rid of anyway; good riddance!

Prof Graham Currie, 22-06-2017

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**Driverless Cars; the end of Transit**

**The Great AV Lie:**

AV’s will take over public transit because public transport is old, too old to be involved in the modern AV technology trend and hence car based AV’s will take over.
Driverless Cars; the end of Transit

Driverless cars could make mass transit obsolete

BY DAVE ROSS
OCTOBER 25, 2016 AT 6:27 AM

A group of self-driving car vehicles position themselves to take part in a test on the roads during a media event at Uber’s Advanced Technologies Center in Pittsburgh.

Number of Motor Vehicles in California (2016) = 35,310,563

Driverless Cars; current status

Autonomous cars on California’s roads have surged: Number of self-driving companies and vehicles licensed to test in Silicon Valley

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Self-Driving Companies</th>
<th>Number of Self-Driving Vehicles</th>
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<td>2016</td>
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<td></td>
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<tr>
<td>2017</td>
<td>17</td>
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</tbody>
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Source: California Department of Motor Vehicles

Australia’s first self-driving car ready for the road this week

The self-driving car, by Tomaszewski

Tesla Model S 3: 11:00pm

Note: This is a 3D printed concept model that will be used to test actual vehicles on the roads.
The Hype Curve; technologists as experts in spin

The Autonomous Car – Contemporary Progress

Source: Gartner; https://www.gartner.com/newsroom/id/3784363
Real Driverless Vehicles; trains

Automated Trains are more efficient

Allowing for shorter journey times and more trains operating at the same time.

The Jubilee Line has increased the number of trains running in peak hours by 38 per cent, allowing an additional 3,900 people an hour.

January 2012 overall, 130 trains, by 2013 this means the Jubilee can carry about 25,500 more people an hour.

Metro Trains Walk Market Penetrates only 7% of Melbourne

Source: PTRG Analysis of Census Journey to Work (2011)
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New Word Definition:

“Non-o-sharing” isn’t sharing. It’s using words to make it look like it is. It is the unscrupulous use of the word “sharing” by technologists to imply that new mobility modes are good and incorrectly asserts they involve lots of shared vehicle occupancy. This is to show they are much better than urban public transport which is not good and doesn’t involve sharing in any good sort of way and which has to be got rid of as soon as possible.

Prof Graham Currie, 22-06-2017
Is Sharing Sharing?

Shared Mobility

The Great Shared Mobility Lie 1:
Shared Mobility is growing transforming cities and improving the efficiency of urban transport through increased vehicle shared occupancy

The Great Shared Mobility Lie 2:
Shared Mobility involves vehicle sharing
Shared Mobility is growing; but is it transforming cities?

Can these companies make taking a bus cool?

Mark Fields, chief executive of Ford, spoke about the Chariot transit service — which was recently purchased by Ford — earlier this year at the North American International Auto Show in Detroit.

By Scott Kilcullen
Globe Correspondent March 03, 2017

Pop-up bus service looks to reinvent mass transit

By Beth Johnson and Monica Niculescu
July 03, 2014 8:06 AM

Read the story ▾
Shared Mobility is growing; is that BAD for transit?

Shared (car) travel is NOT growing; its been DECLINING for 30 years

Source: Charting Transport (2017)
With AV’s we can now achieve occupancy; BELOW 1!

Are Driverless cars the solution or another part of the problem?

Source: Charting Transport (2017)
### When Ride Sharing Isn’t – TNC’s and Carshare

- **Uber** assumed to have the same occupancy as Taxi at 1.66 per vehicle (including the driver)
  - Source: San Francisco County Transportation Authority (2017) ‘TNC’s Today’

- **CarShare** – average vehicle occupancy is 1.44 (including the driver)
  - Source: Cervero, R, Golub A and Nee B (2007) ‘San Francisco City CarShare: Longer-Term Travel-Demand and Car Ownership Impacts’ Institute of Urban and Regional Development University of California at Berkeley

It isn’t much in the way of sharing

Slightly better than Melbourne traffic but known to have positive impacts in reducing car ownership

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**This is called ‘SHARED MOBILITY’**

**This is NOT Called ‘SHARED MOBILITY’**

Source: Transport for NSW
Bus based demand responsive sharing has in general; always failed

Academic Results – DRT Trials:
“Most of the services that have stopped have done so because of the high costs in relation to their patronage”
Oxley(1979)

“Increased mobility is rather intangible when compared to the harsh reality of deficits on a balance sheet”
Transport Canada (1978).

Bridj, local on-demand bus service, is shutting down

Matthew George, the twin-engine founder and owner of Bridj, loaded a truck with packages for delivery in August 2015.

By Curt Woodward, Adam Vancuren and Tellez Gana

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Cities; humanities future

Mass Transit=Efficiency and Volume

To carry 35,000 people per hour per direction, you need:
- A 17m wide road used only by car
- A 6m wide road used only by buses
- A 9m wide railway track bed for metro

Comparación de emisiones por viaje

*Data based on road and railway emissions. Cálculos basados en emisiones de carretera y ferrocarril.
Public Transport is the most efficient form of SHARED MOBILITY

This is NOT 'SHARED MOBILITY'

This IS 'SHARED MOBILITY'

Source: Transport for NSW 34

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**New Word** Definition: "Transit fusion" is the adaptation of transit vehicles, infrastructure and service design to integrate the best features of new technologies into new transit modes and services to improve overall service performance, attractiveness and effectiveness outcomes.

Prof Graham Currie, 22-06-2017

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**Transit Fusion**

Transit runs the Car Share Scheme
Autonomous Buses, Dockless Bikes etc – first/last mile solutions

Metro Trains Walk Market Penetrates only 7% of Melbourne

Bus Rapid Transit IS Transit Fusion; Rubber Tired Railways; cost effective adaptation of new technologies
PLACE HOLDER FOR THE VIDEO

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