

# Nudged into the Car: A model of Mobility Cultures

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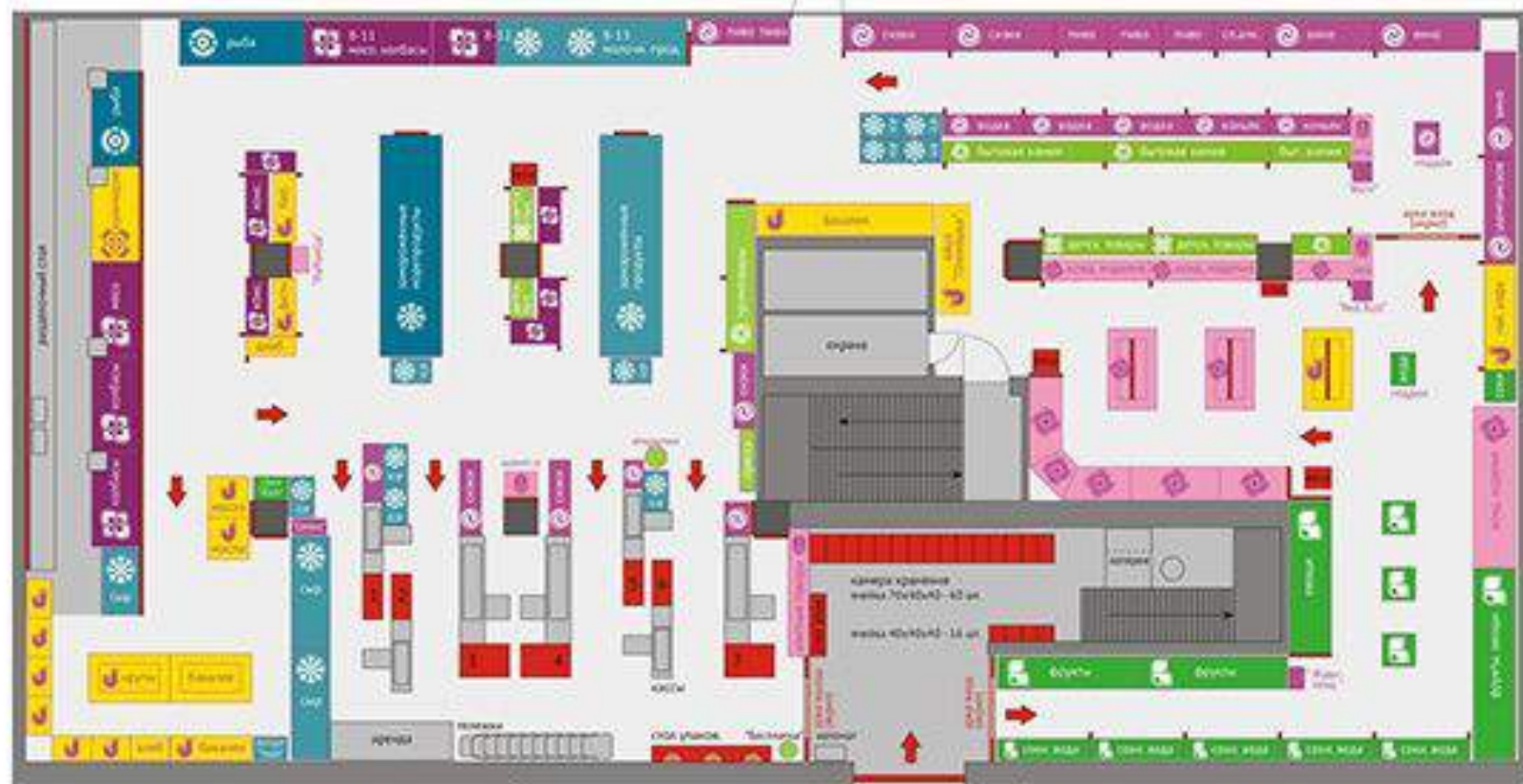


UNIVERSITY  
of  
**OTAGO**  
Te Whare Wānanga o Ōtāgo  
NEW ZEALAND

# Nudging...

- Paths of least resistance
- Never forcing, but making it easier

Планировка торгового зала супермаркета. Расположение торговых площадей.



Масштаб 1:100

Условные обозначения.

Цветовая маркировка отделов:



Навигационные стенды и панели.  
Реконструкция и декор существующего торгового оборудования





# countdown





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But...





# Mode shift is a wicked problem

- Non-linearity
- Feedback loops
- Randomness

# **Making Cycling Irresistible: Lessons from The Netherlands, Denmark and Germany**

John Pucher & Ralph Buehler

**Table 1.** Key policies and innovative measures used in Dutch, Danish and German cities to promote safe and convenient cycling

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**Extensive systems of separate cycling facilities**

- Well-maintained, fully integrated paths, lanes and special bicycle streets in cities and surrounding regions
- Fully coordinated system of colour-coded directional signs for bicyclists
- Off-street short-cuts, such as mid-block connections and passages through dead-ends for cars

**Intersection modifications and priority traffic signals**

- Advance green lights for cyclists at most intersections
- Advanced cyclist waiting positions (ahead of cars) fed by special bike lanes facilitate safer and quicker crossings and turns
- Cyclist short-cuts to make right-hand turns before intersections and exemption from red traffic signals at T-intersections, thus increasing cyclist speed and safety
- Bike paths turn into brightly coloured bike lanes when crossing intersections
- Traffic signals are synchronized at cyclist speeds assuring consecutive green lights for cyclists (green wave)
- Bollards with flashing lights along bike routes signal cyclists the right speed to reach the next intersection at a green light

**Traffic calming**

- Traffic calming of all residential neighbourhoods via speed limit (30 km/hr) and physical infrastructure deterrents for cars
- Bicycle streets, narrow roads where bikes have absolute priority over cars
- 'Home Zones' with 7 km/hr speed limit, where cars must yield to pedestrians and cyclists using the road

**Bike parking**

- Large supply of good bike parking throughout the city
- Improved lighting and security of bike parking facilities often featuring guards, video-surveillance and priority parking for women

**Coordination with public transport**

- Extensive bike parking at all metro, suburban and regional train stations
- 'Call a Bike' programmes: bikes can be rented by cell phone at transit stops, paid for by the minute and left at any busy intersection in the city
- Bike rentals at most train stations
- Deluxe bike parking garages at some train stations, with video-surveillance, special lighting, music, repair services and bike rentals

**Traffic education and training**

- Comprehensive cycling training courses for virtually all school children with test by traffic police
- Special cycling training test tracks for children

- Stringent training of motorists to respect pedestrians and cyclists and avoid hitting them

**Traffic laws**

- Special legal protection for children and elderly cyclists
  - Motorists assumed by law to be responsible for almost all crashes with cyclists
  - Strict enforcement of cyclist rights by police and courts
-

# Cultures of the roads



# 1937



TRAFFIC "BOTTLE-NECK" IN CHRISTCHURCH—A traffic "cop" directing cyclists and motorists at the intersection of High Street and Hereford Street which leads into Cathedral Square by the famous "bottle-neck." Coming down High Street is one of the Department's new diesel buses.

# 1954



# 1969



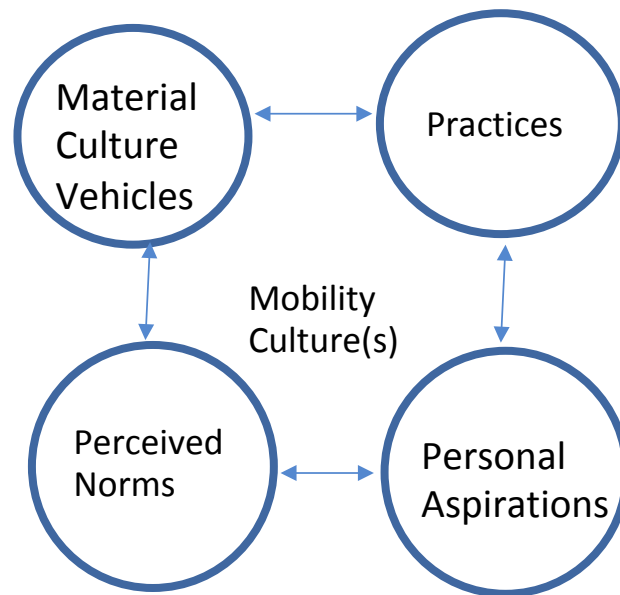
# 2018

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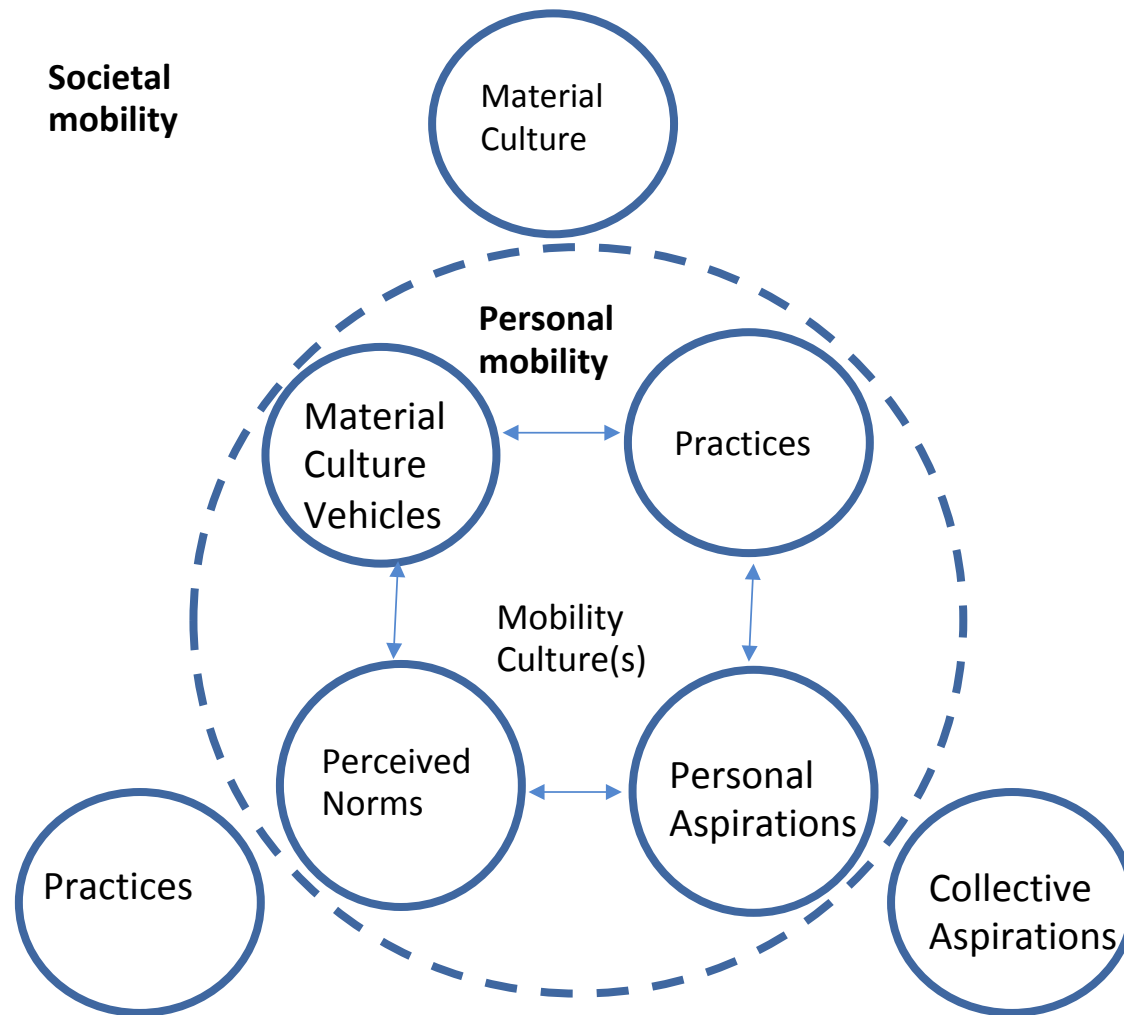
# What happens before they (don't) ride their bike/ walk/ride public transport?

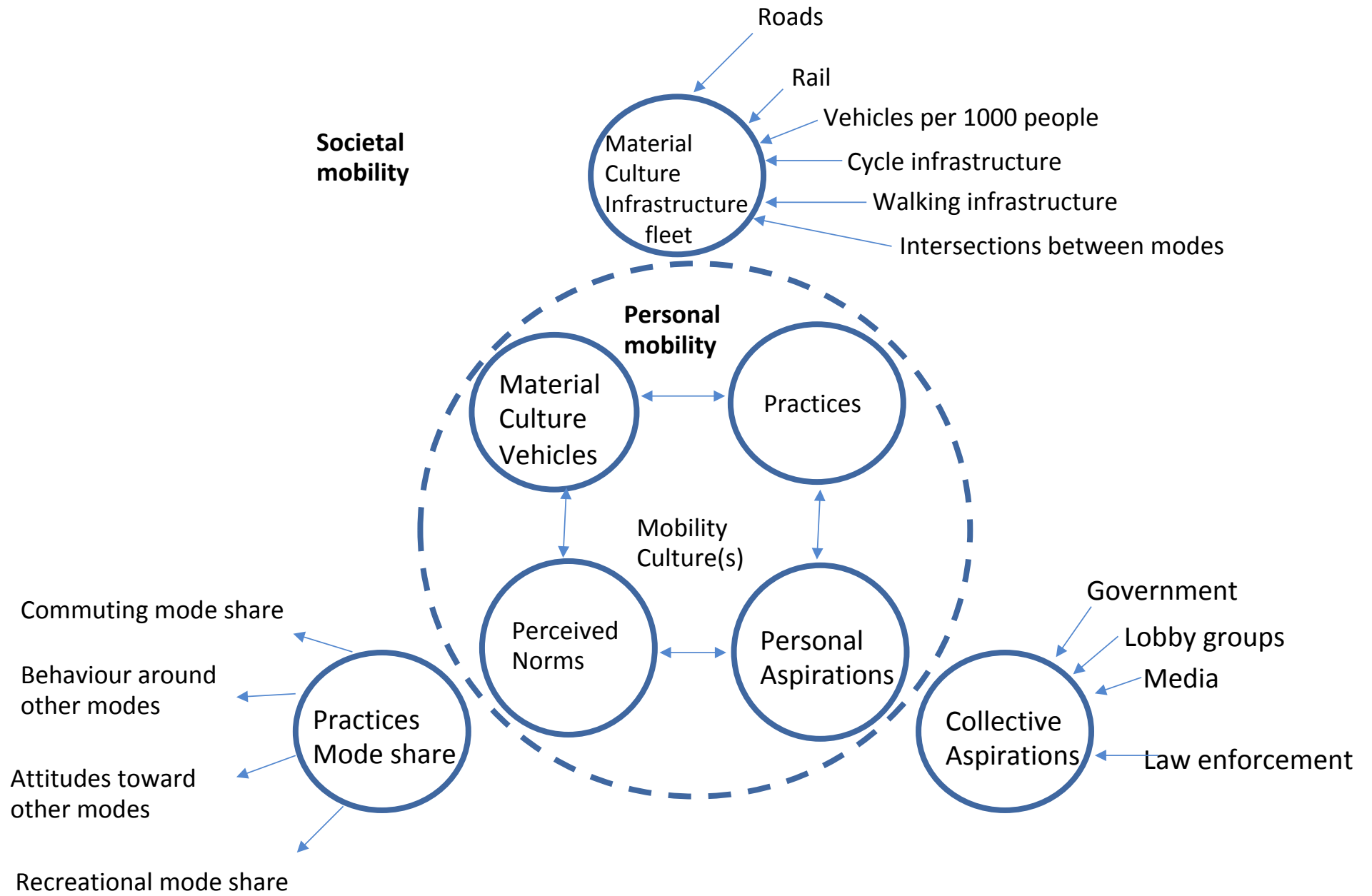
- What's stopping potential cyclists/walkers/public transport riders becoming actual cyclists/walkers/riders?
- The 'Latent Demand Problem'

# Mobility Cultures Model









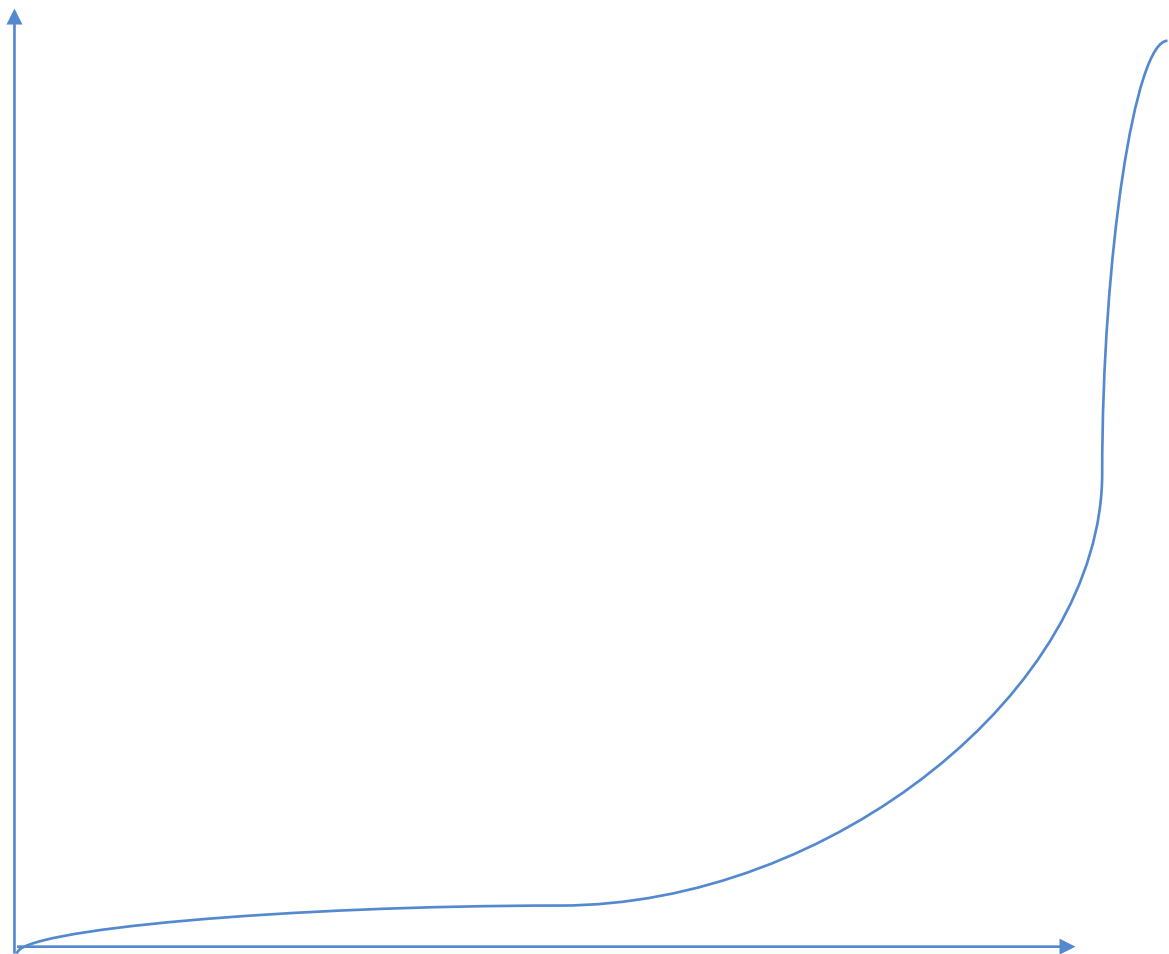
# Changes in response angle/gradient

- Each of the factors has a stepped response for individuals
- the factor must meet a minimum level for it to be considered.  
hygiene factors
- once the minimum level is reached there will be different response rates depending on the level of the factor/attribute

# The 97% problem



Change/  
adoption



Attribute

**Drove Alone: 85.4%**



**Carpool: 7.6%**

**Worked at Home: 3.1%**

**Other Means (Bicycle, Taxi, cab): 2.0%**

**Walked: 1.3%**

**Public Transit: 0.6%**

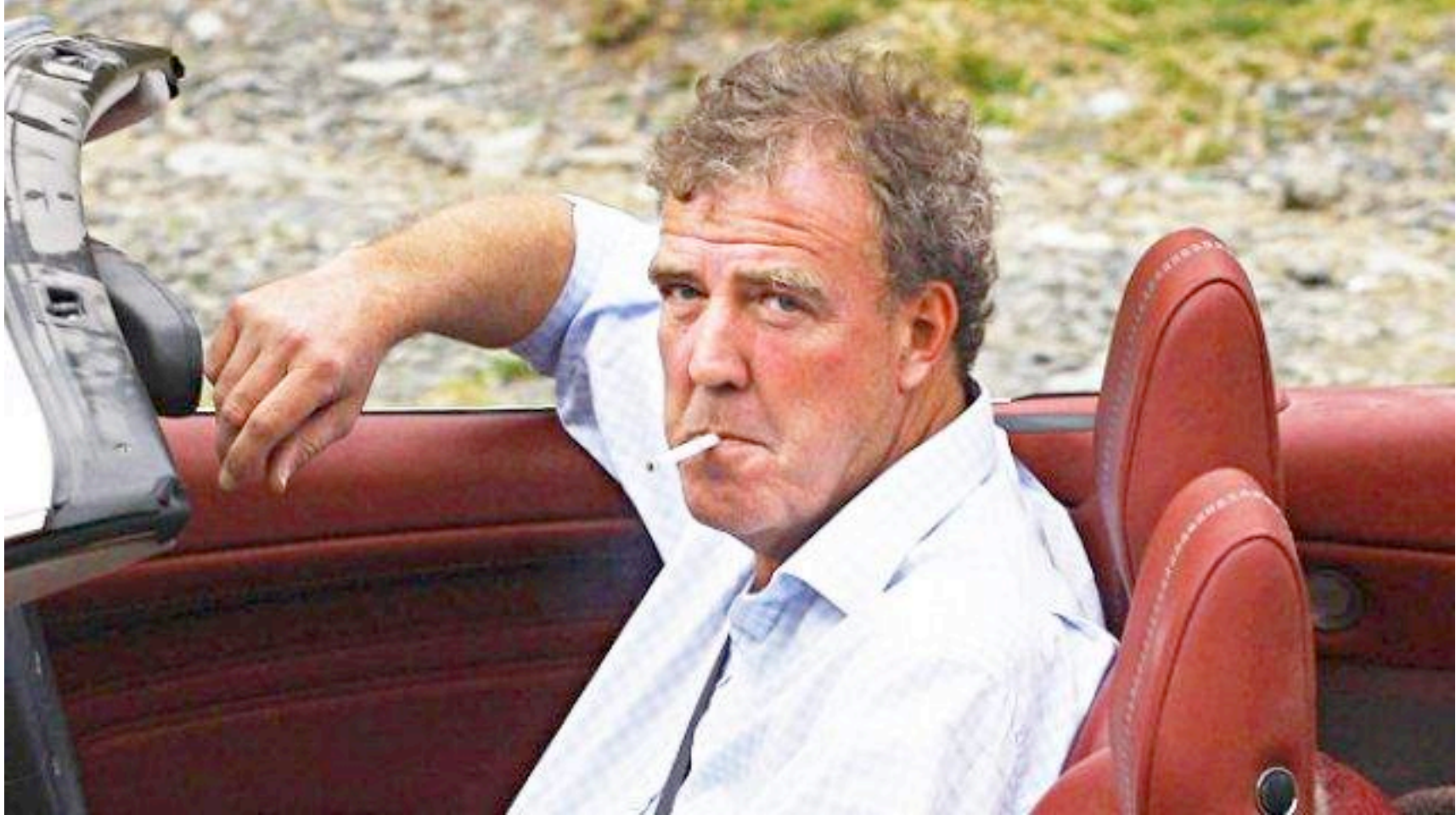




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# Discussion and Conclusion

- infrastructure is a necessary, but not sufficient attribute
- we need to monitor/measure, understand and change a lot more than the roads

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