



## Beyond Greatest Enforceable Risk

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**The limits of my language mean the limits of my world**  
- Ludwig Wittgenstein (Tractatus Logico-Philosophicus)

September 21, 2010

## What is Greatest Enforceable Risk

Late 1980s to early 1990s

Severe fiscal constraints (we were broke)

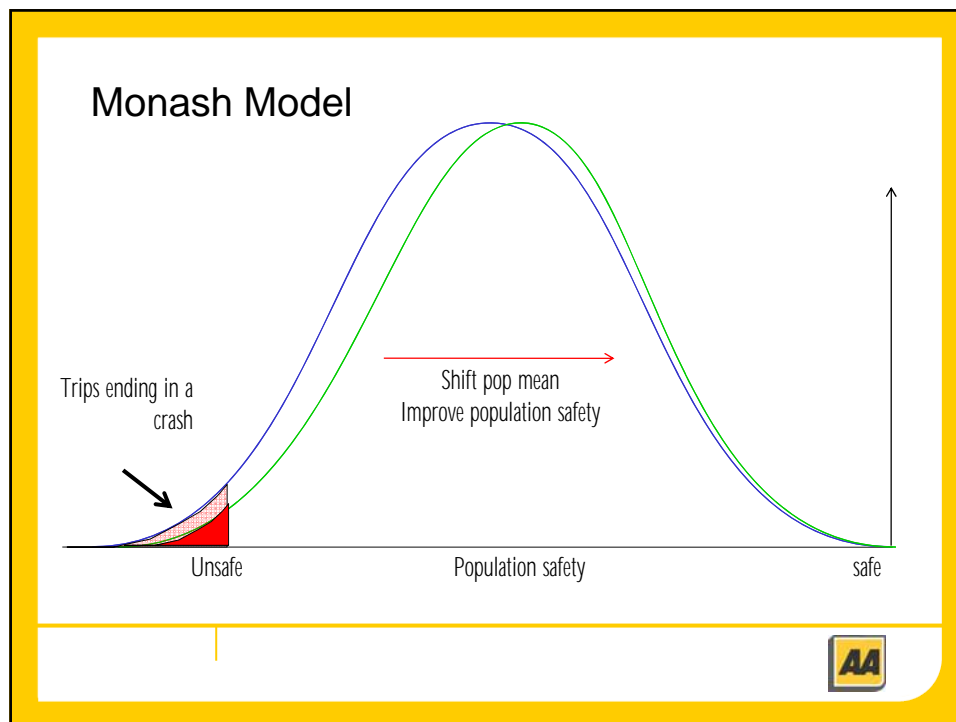
Policy fad for intervention logic ("common sense on stilts")

1987 Road toll 795 dead (151 over 0.8 limit) 18,728 injuries

Essential question

Using existing resources what can be done which achieves the greatest safety benefit for the lowest transaction cost?





### Proxy progress measures

- Average and 85<sup>th</sup> percentile open road and urban speeds in surveys
- Seatbelt and child restraint compliance survey
- Percentage of drivers over 0.8 BAC limit at repeated annual checkpoints

Used to develop regression equations predicting reductions in social cost based on the above variables

Shaped MoT public attitude to road safety surveys



## Write lots of tickets!



### Focus on

Alcohol

Speed

Restraints

Intersections

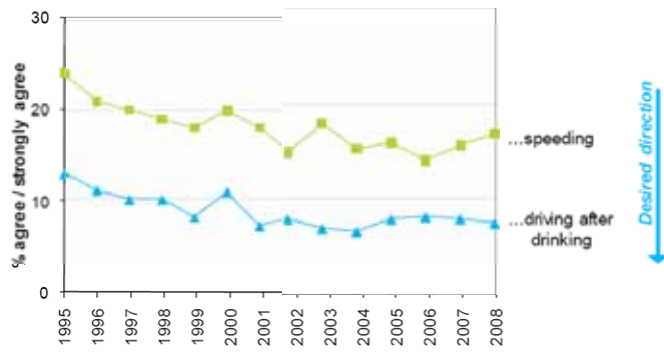


## And advertising to support the message

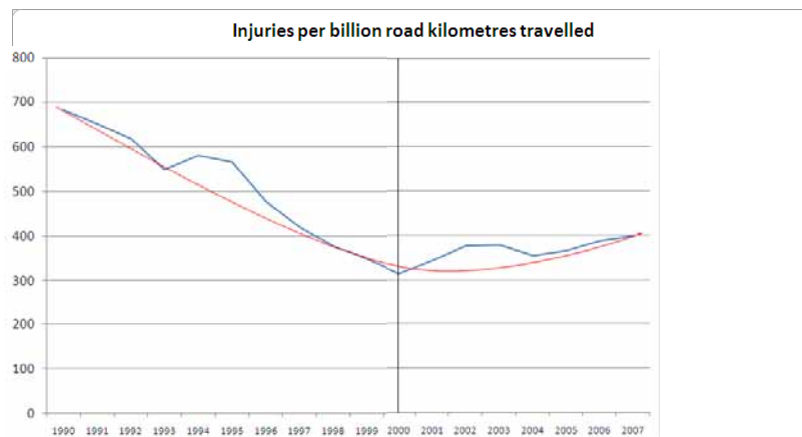


## And it worked! Public attitudes changed

Figure 1: People who agreed that there isn't much chance of an accident if careful when... (decreasing is good)

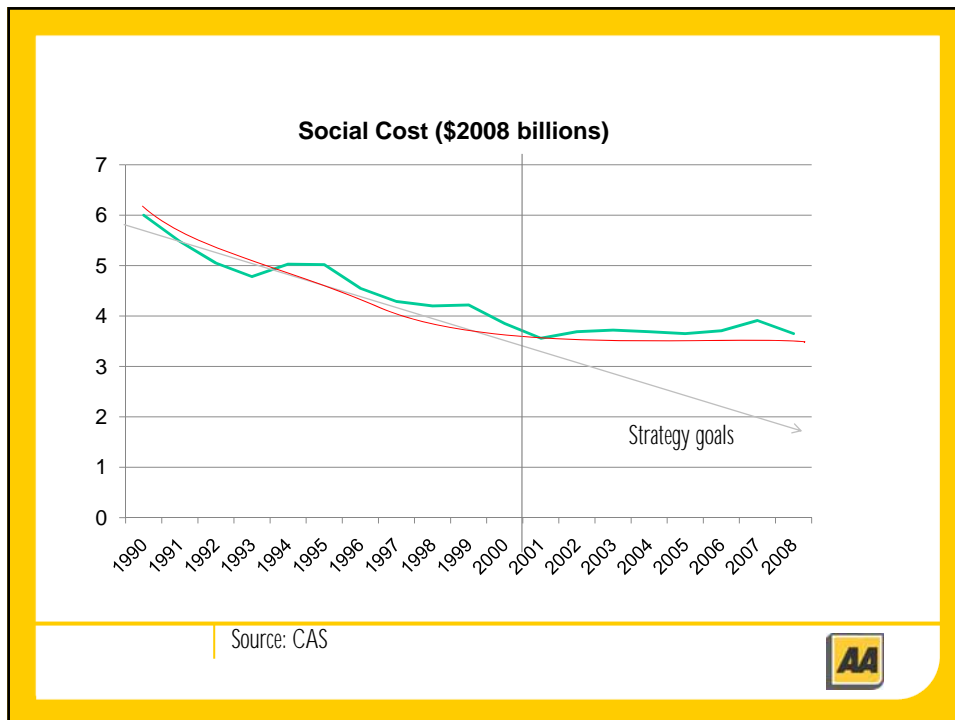


## Reducing the road toll..until



Sources: CAS








## 2003-4 Reviews

**Duignan (not convinced of regression calculations)**  
 Data inadequate to verify regressions, lots of guestimates. Fatality data too slim a basis for proper evaluation.

**Breen (Jeanne's common sense suggestions)**  
 If you do what other countries with better road safety statistics do, you will achieve what they achieve.

**Politicians**

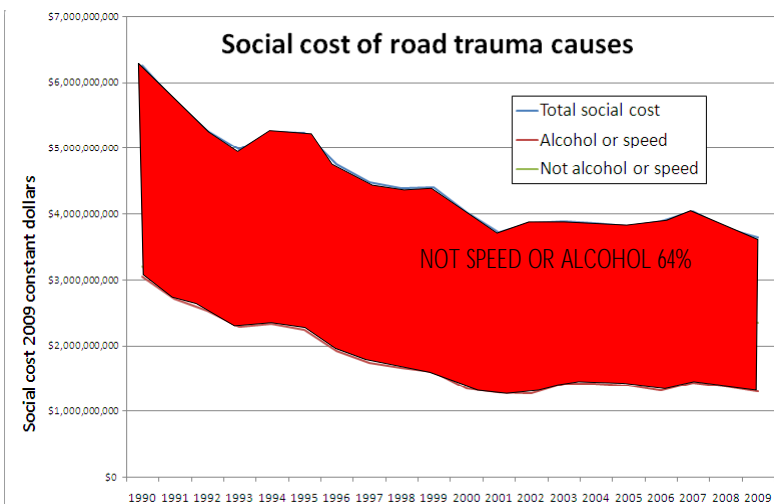

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## Breen Recommendations

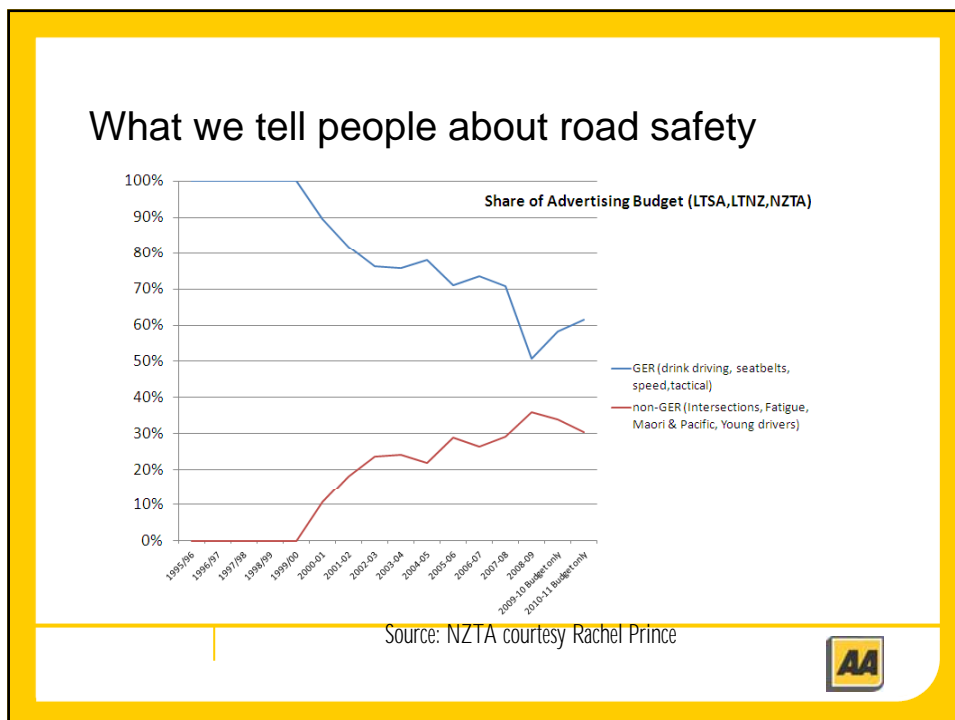
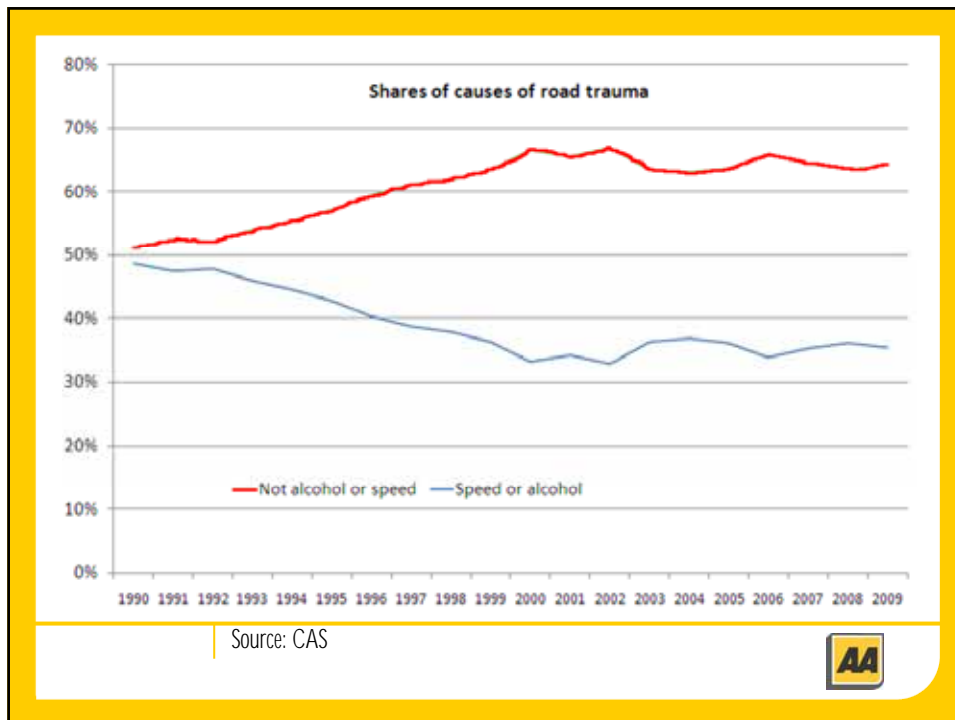
- Increase Statistical Value of life to 1998 survey level (almost double) to increase engineering investment
- Regulate vehicle imports
- Demerits on speed camera tickets
- Reduce average speeds on open roads further
- Reduce adult drink drive limit to 0.5 BAC
- Reduce youth drink-drive limit to 0.1 BAC
- Increase driving age in phases from 15 to 16 to 17
- Increase ACC motorcycle premiums
- Improve information gathering

Sources: Jeanne Breen

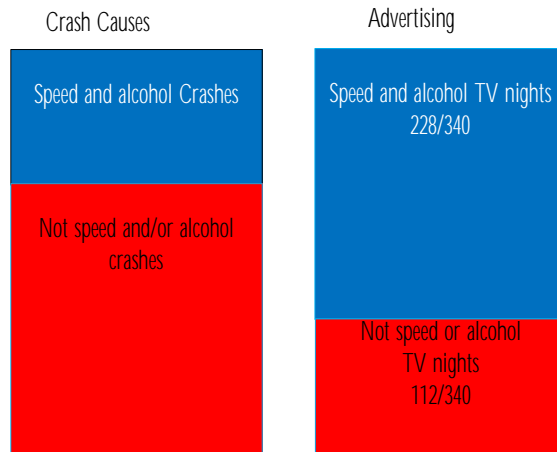


Source: CAS





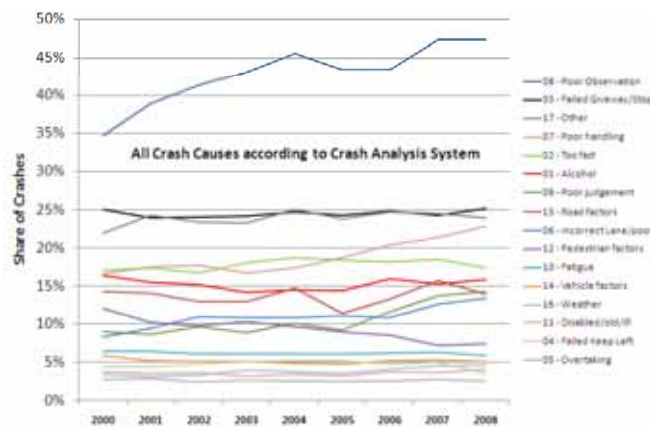
## Public awareness of crash causes



Source: NZTA Road Safety Advertising Calendar



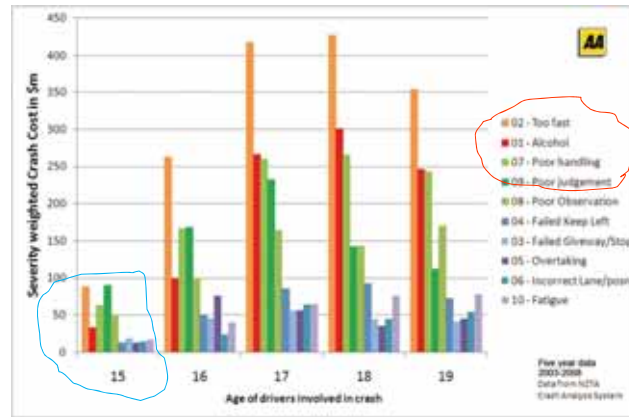
## Why do people really get injured on the road?



Source: CAS



## Teen driver crash causes



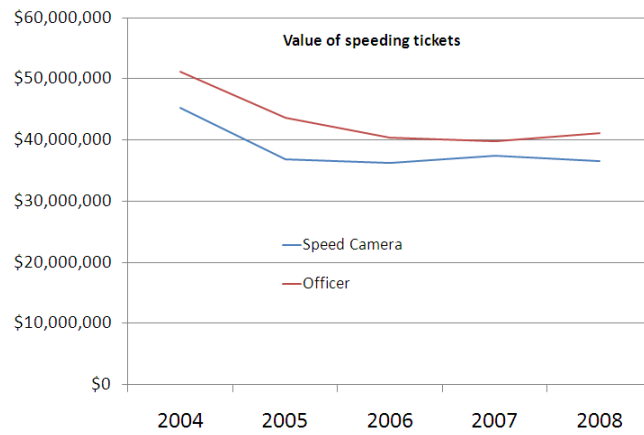
Source: CAS



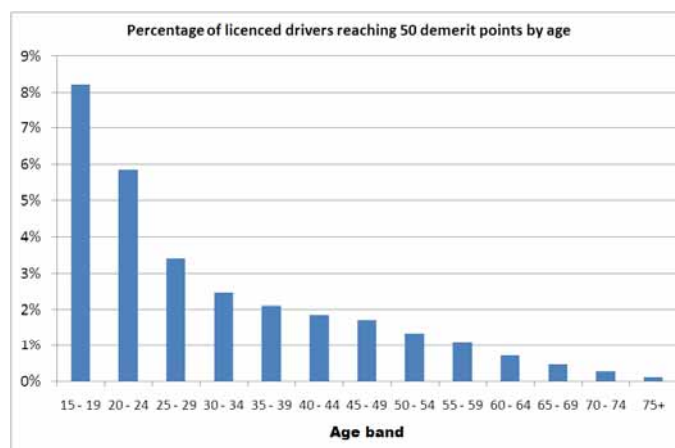
Speed



## Revenue stream from speed



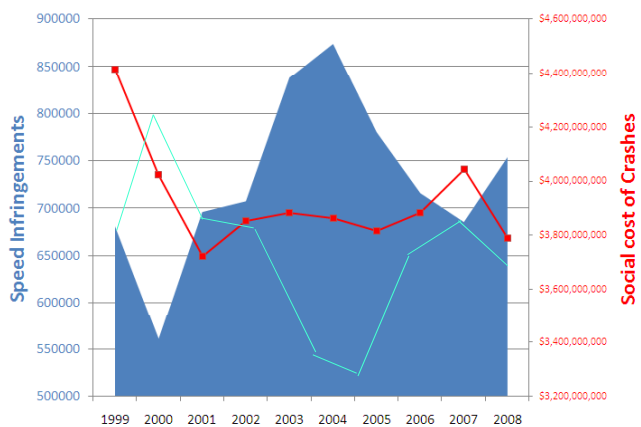
## Who gets the warning letter at 50 demerits



Source: NZTA



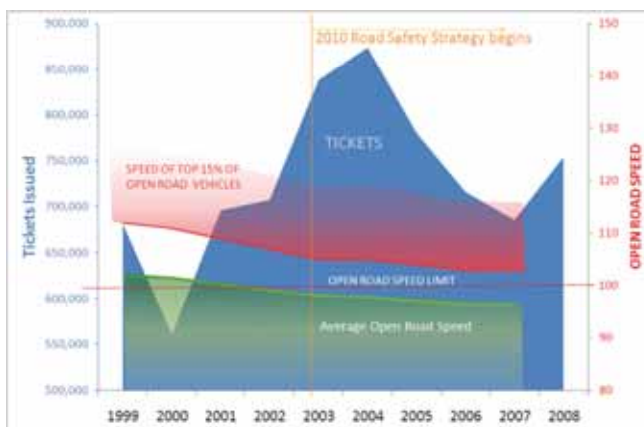
### 2004: Increased tickets *and* social cost !!!



Sources: MOT, NZ Police



### Speed camera and officer infringements

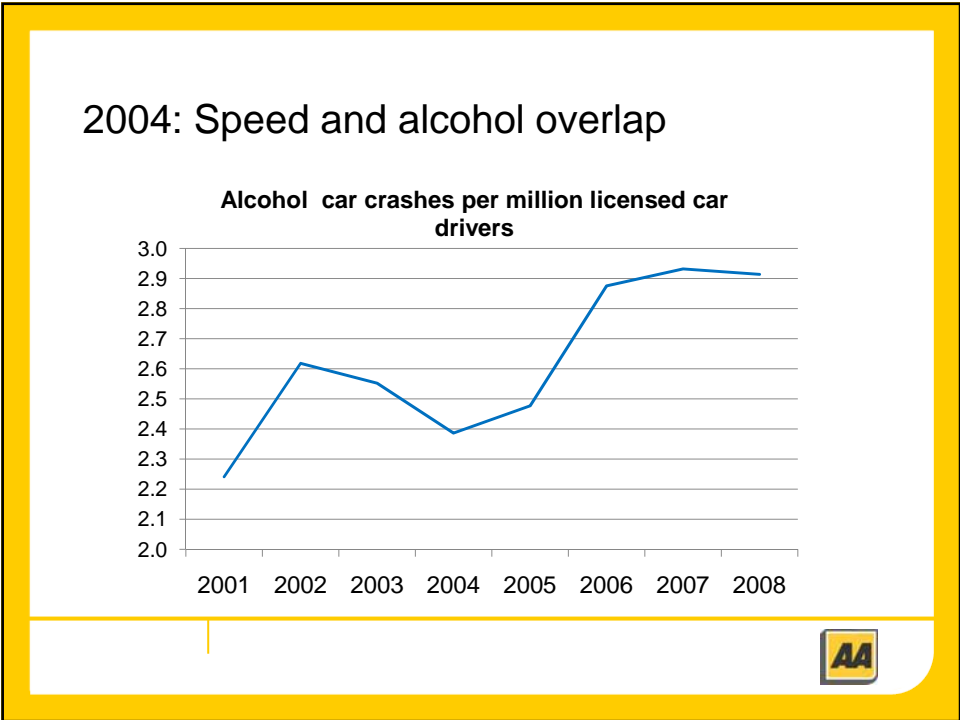


Sources: MOT, NZ Police

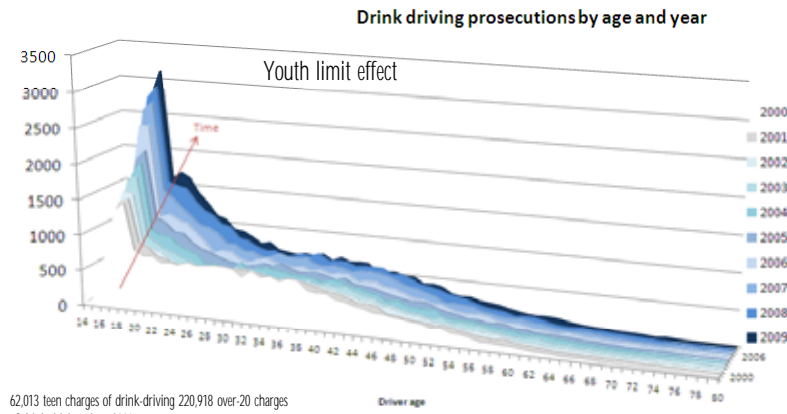




Alcohol



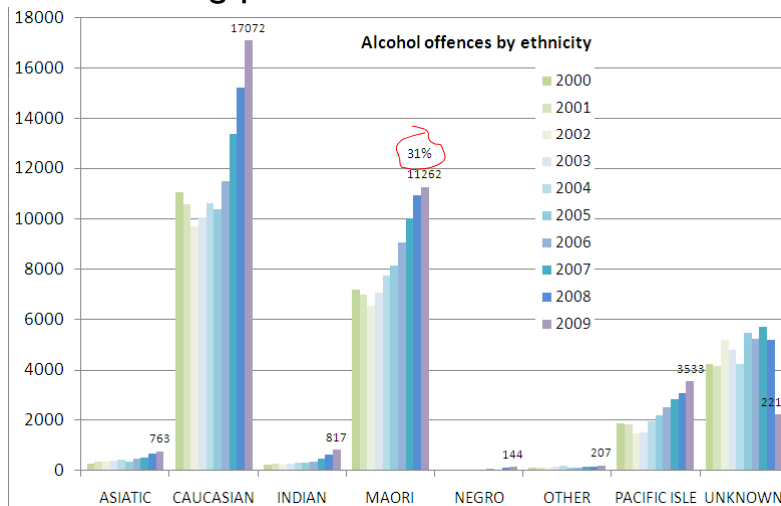
## Drink driving prosecutions



Source: NZ Police

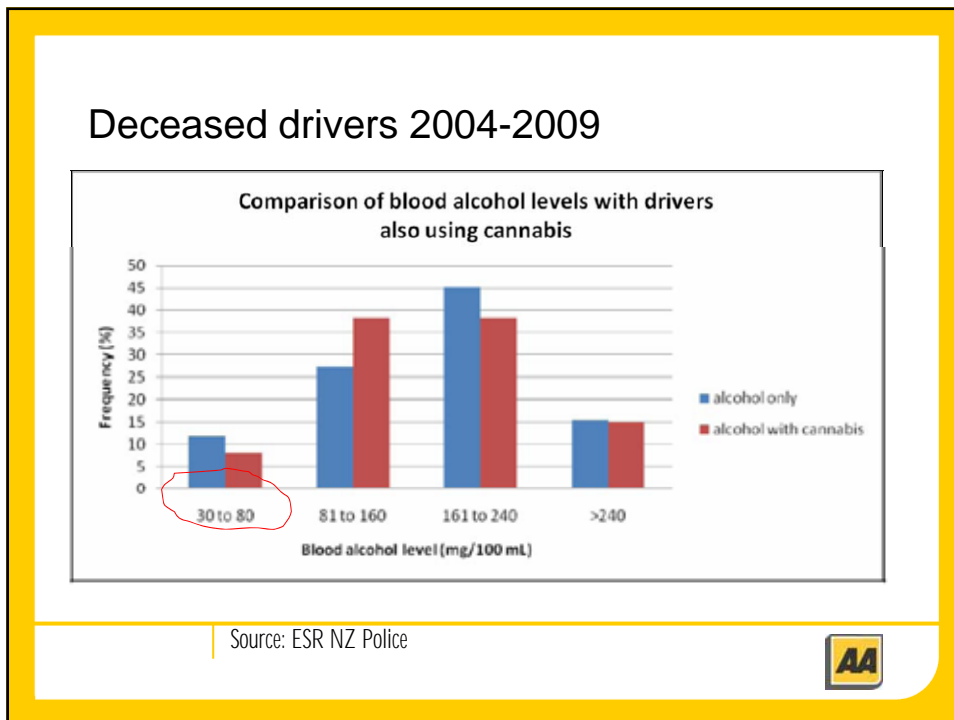
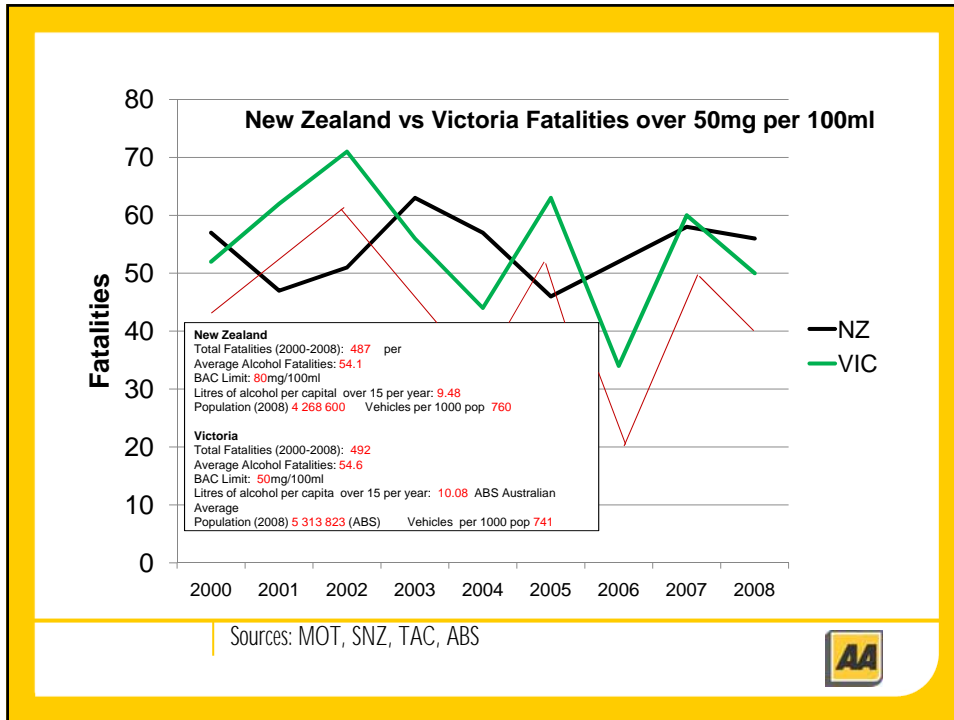


## Drink driving prosecutions

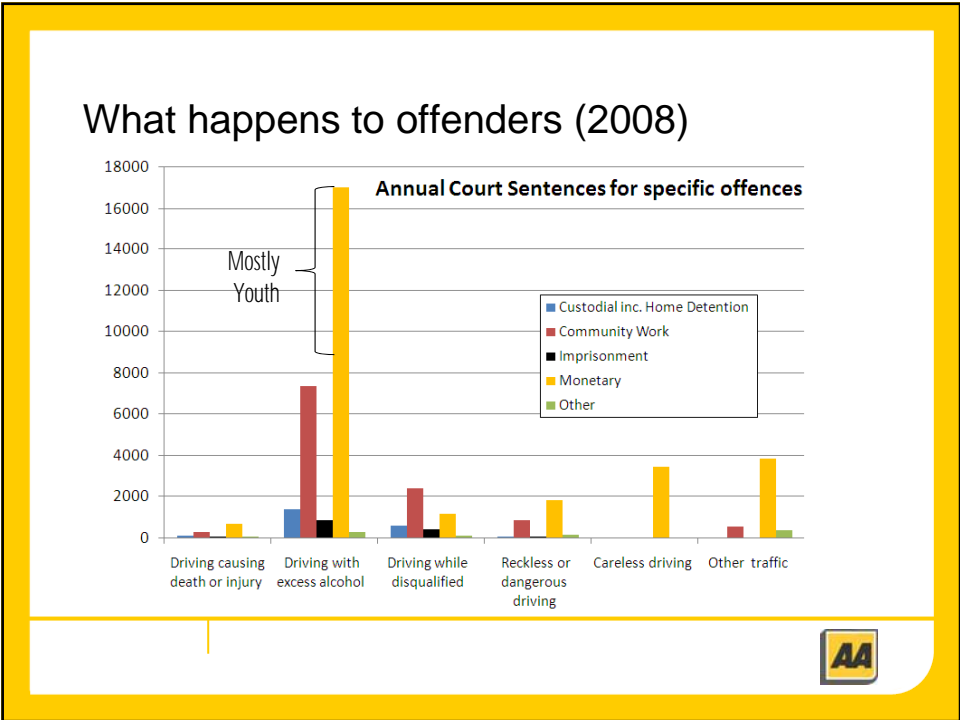


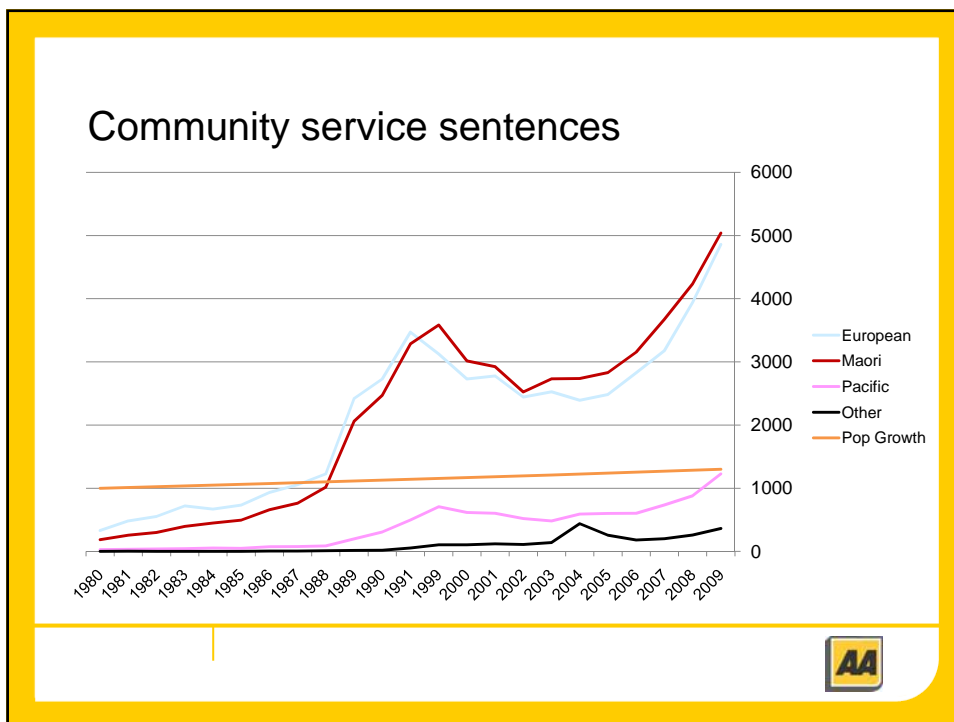
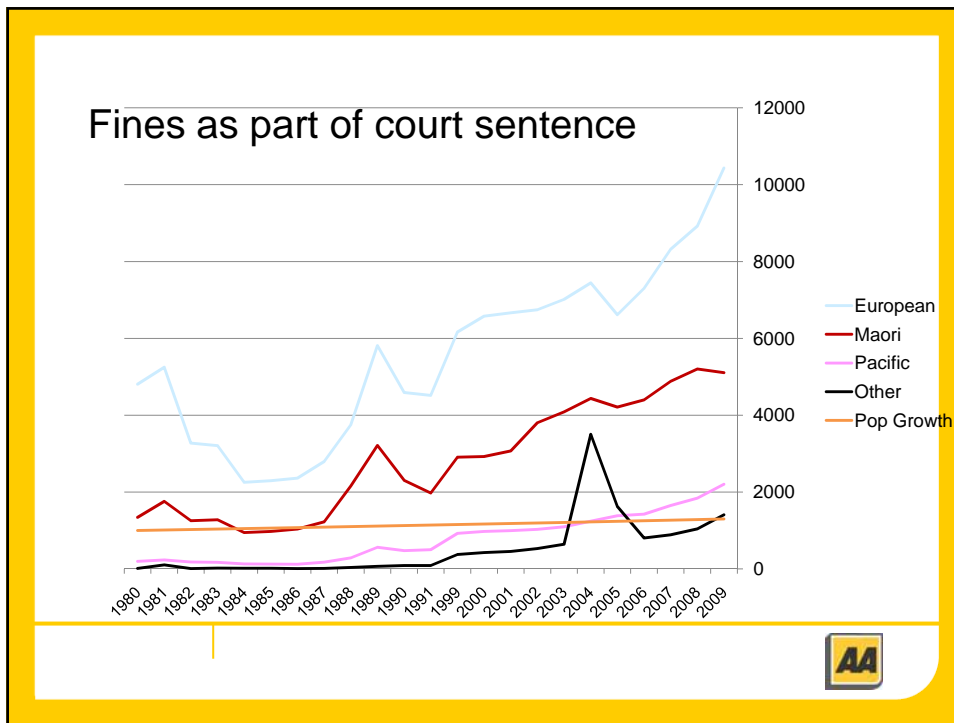
Source: NZ Police



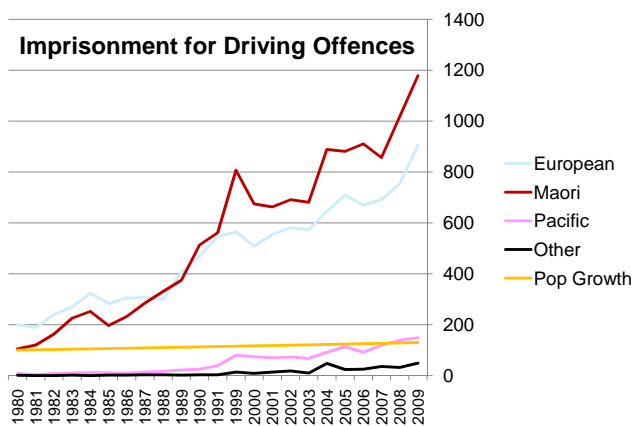


# Court imposed penalties





## Who do we send to jail for driving offences?



GER: What it is and is not



### What is GER not about

- 2/3rds of social cost (not speed or alcohol)
- Preventing MOST crashes or saving MOST lives
- Alerting road users to the causes of 2/3rds of trauma costs e.g fatigue, medical conditions, weather
- Spending money on anything but Police and propaganda supporting enforcement



### What GER is about ?

- Speed and alcohol predominantly youth related
- Youth alcohol level results in more penalties
- Changing public attitudes
- Fining people with mental health problems
- Maori have disproportionate rate of alcohol prosecution and greater rate of severer sentences
- Police are the solution regardless of the issue
- Revenue



## But what if Maori

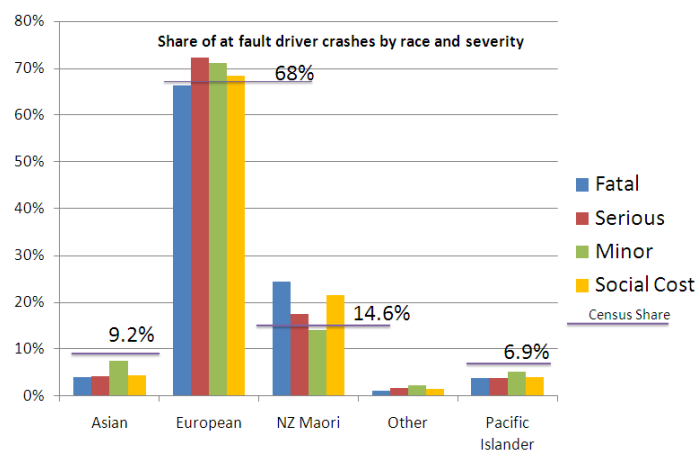
- were more likely to believe Police stopped them for reasons other than speeding or drink-driving.(Driving while brown)
- believed that the NZ Police was a “racist institution”
- were less likely to believe in seatbelts
- were more likely to enjoy driving fast, believe there was little chance of being caught, and more likely to believe that policing speed was not about reducing the road toll
- found it much harder to “go easy” when drinking with friends
- were more likely to be binge drinkers than moderate drinkers

Because all of these things are true

Sources: MOT Public Attitudes to Road Safety Surveys, ALAC Survey, NZ Police Race Relations study 1998



## All crashes since ethnicity stats collected



Source: SNZ, CAS



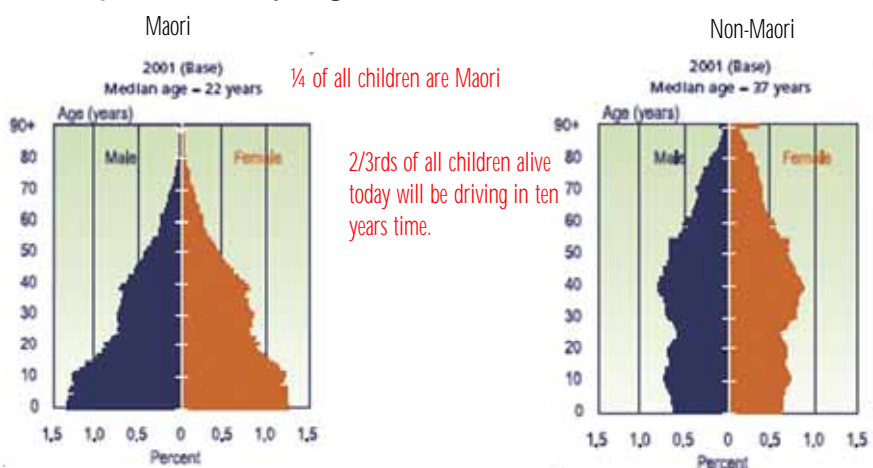
## Maori share of injury crash causes

Maori Share of crash causes	5 year average	
All Cause Cats		
100 - Alcohol or Drugs	40%	Over 200% Population proportion
110 - Too fast for Conditions	31%	
120 - Failed to Keep Left	20%	
130 - Lost Control	20%	
140 - Failed to Signal in Time	14%	
150 - Overtaking	21%	Over 150% Population proportion
170 - Wrong Lane/Turned From Wrong Position	16%	
180 - In Line of Traffic	10%	
190 - Sudden Action	17%	
200 - Forbidden Movements	23%	
300 - Failed to Give Way	11%	
320 - Did not Stop	12%	In line with Population proportion
330 - Inattentive: Failed to Notice	14%	
350 - Attention Diverted By:	19%	
370 - Did Not See or Look for Another Party Until Too Late	11%	
380 - Misjudged speed	13%	
400 - Inexperience	20%	
410 - Fatigue (Drowsy)	28%	Notably under Population proportion
420 - Incorrect use of vehicle controls	13%	
430 - Showing Off	38%	
500 - Illness and Disability	13%	
510 - Intentional or Criminal	72%	
520 - Driver / Passenger	40%	
530 - Miscellaneous Person	42%	

Source: CAS



## Population by age in 2001



Source: SNZ

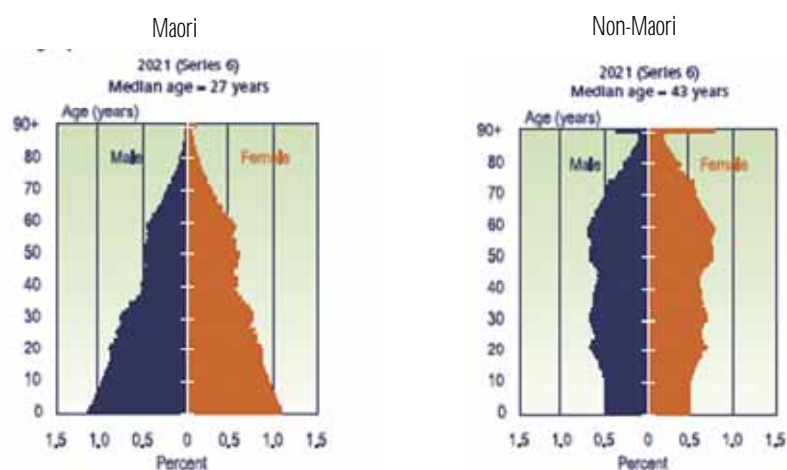


## Questions about young Maori drivers

- Who is teaching them to drive?
- Why would they think any differently to their parents?
- Given what we know about teen and Maori prosecution rates are we setting this generation up for conflict with Police?
- What will that achieve?
- Who are we relying on for our economic future anyway?

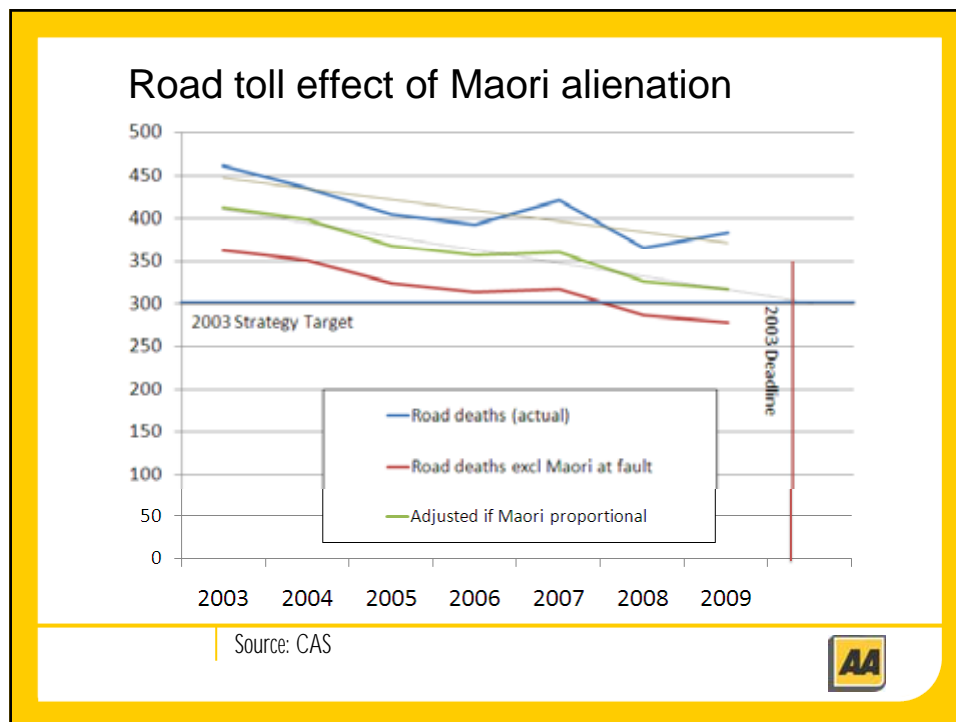


## Population by age 2021



Source: SNZ





## Maori

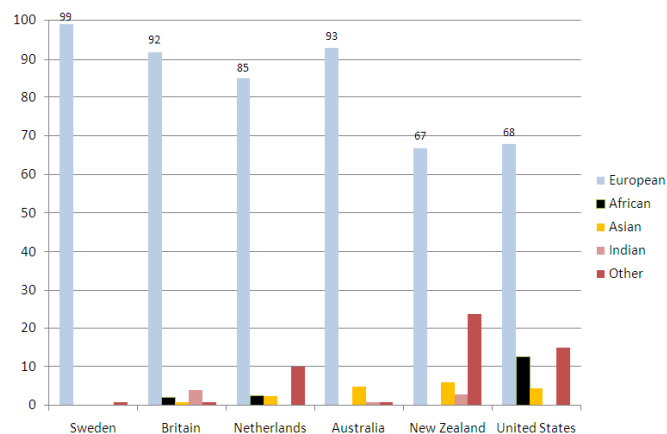
- Have not responded to the GER programme in the same way as non-Maori
- Are by no means the whole road safety problem
- Are a significant proportion of the most serious crashes
- Have their own culture and language
- Have long-standing negative views of Police dating back to the New Zealand Wars
- Are still dealing with decades of institutional racism
- Population is growing rapidly



## International advice



## Ethnic diversity of road safety model nations



Source: SNZ, US Census, ABS, SUK, Wikipedia



*The limit of my language are the limits of  
my world*

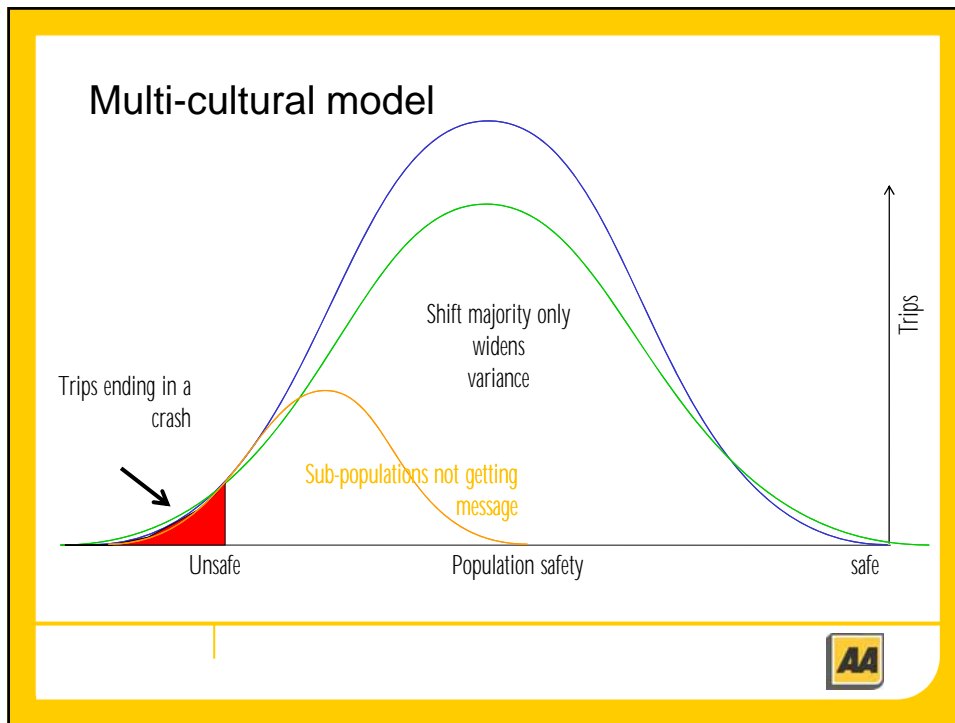
Ludwig Wittgenstein

Tractatus Logico-Philosophicus (1921)




Language Silos





Beyond GER: What do we do?



Its about believing this



What can we improve?



**Cars?**

Provide largest saving but depends on economy and value of dollar.



**Roads?**

Provide persistent safety but we have a lot of low volume, low safety roads and a full programme for a decade



## Drivers



Most drivers are careful responsible people who do not crash, and when they do it is not because of speeding or drink-driving.



## Drivers: What they don't know is killing them

- Roadside hazards – Fix AND Inform
- Fatigue – Awareness AND Solutions (esp tourists)
- Cellphones - Hands-free is no safer, but marketed
- Weather – Awareness of dazzle, spray, heavy rain
- Road surfaces – Gravel, ice, heavy rain
- ABS/ESC – You don't steer into skids anymore
- Side impacts – 100x more deadly than frontal
- Child restraints – Not all equal
- Older drivers – Turning left is far safer than right



## Licensing

An MOT analysis of the time taken to progress through the GDLS found that by

17 months 25% had progressed to a full licence,

36 months 48% had a full licence

But

53% never progressed to a full licence.

35% of at fault Maori teens are un-licensed, disqualified, or forbidden

Sources: MoT, CAS



## Driving vs cooking



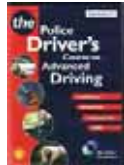
Gordon Ramsay  
Loud-mouth, Self-opinionated  
High public profile  
Michelin 3-Star Chef



Jeremy Clarkson  
Loud-mouth, Self-opinionated  
High public profile  
No qualifications at all



## Driving as a skill



Seen as being about speed. Message: Police can speed but ordinary drivers can't because you aren't experts like us.



Eleven percent of Kiwi households have some form of car racing game or program



We need to promote a completely different idea of what an expert driver actually looks like and does. We need to show respect for the knowledge.

Source: Interact NZ



## Everyone's problem, everyone's responsibility

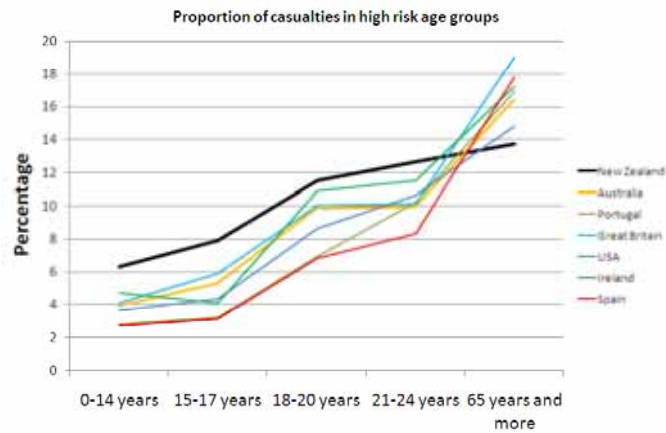
**1 in 5** Adult New Zealanders  
experience mental health  
or addiction problems  
That makes mental health  
everyones problem



Source: Mental Health Commission



## New Zealand stands out for failing youth



Source: IRTAD

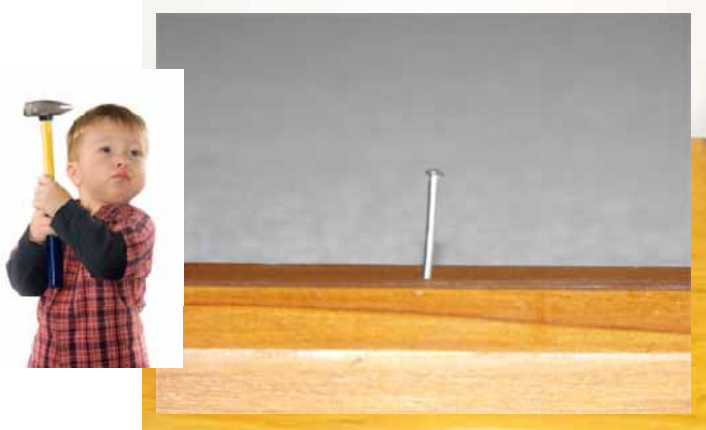


## What do we need:

1. Better judicial options for offences
2. Anticipatory responses to mental health issues
3. Maori ownership of Maori road safety problems
4. Better graduated licensing systems
5. More public education (with & without enforcement)
6. A good driver role models
7. Less Police domination of safety and more listening
8. More joining up across Government



When you only have a hammer



We need more than just deterrence



Thank you

