

## The End of Speed Related Accidents?

### **Abstract:**

If our society was serious about reducing speeding related deaths and injuries we would already have one part of the solution in place. Right now the technological and social means for dramatically reducing the incidence of speeding is available to us. So are we serious about slowing down?

### **An Ideas Piece – The End of Speed Related Accidents**

The Federal and State Governments in Australia would like you to believe that they are seriously concerned with the potential and often proven impacts of driving a motor vehicle at inappropriate speeds. Checks on government websites, comments attributable to politicians in various media outlets and signage around Australia suggests that speed related accidents on roads are financially expensive, socially debilitating, usually avoidable and undesirable.

Yet the realities of actions undertaken by various governments, as representatives of the people who elect them (that's you and me) suggest that impressions are more important than actions.

### **The Two Streams of Government Intervention**

Typically government support and funding on road safety falls into two streams. First there's the media campaign which serves two aims: to promote the message of safety; and to promote the idea that respective governments are taking action. Judged on those criteria, the funds invested by governments have been by and large, overwhelming successful.

One such message sponsored by a then popular radio station and issued as a bumper sticker was 'Declare war on 664'. This slogan (from 1983 in Victoria) was one of many used to address the psyche of inappropriate driving choices through speed and alcohol and the desire to lower the road toll of 664 deaths in the previous year. The campaign urged members of society to take more seriously, their responsibilities as drivers of vehicles and to be more aware of the potential for physical harm as a result of inappropriate choices. Iterations of this message have evolved to be more graphic, or more direct and more 'open' in addressing the issue and it would be fair to say, have been effective at changing part of the social perspectives of driving.

The second stream of investment falls into the area of compliance requirements. 'Compliance requirements' covers a broad array of activities which have one thing in common – a law exists to force them to be catered for. It could be argued that without the 'law' being enacted, many of the activities currently undertaken would be dropped because they would be considered too expensive to continue (vehicle safety construction), socially unpalatable to large sections of society (alcohol and speed enforcement) and bureaucratic meddling in what could really amount to civil disputes (the various transport accident entities).

Although significant funds have been invested in media campaigns encouraging a changed view of driver responsibilities – in other words 'to slow down', I would suggest that most of the allocation of funds addressing the issue of compliance does not address the issue of inappropriate speeding. **For the purpose of this ideas piece I would suggest that many**

**of the legal measures enforce the exact opposite message – that travelling in excess of set limits (speeding) is an acceptable choice for drivers.**

### **How Laws Encourage Speeding**

Current Compliance based approaches send very different messages to society than that which is intended from the media based approaches. Rather than address the issue of the inappropriateness of speeding they shift the focus to one of 'safety AT speed'. Arguably almost every single law enacted in the area of vehicle construction has at its central theme, the idea that the vehicle is safe to travel at a speed.

The introduction of compulsory seatbelts in the 1970's has had a wonderful impact on reducing the death toll and serious injury toll in vehicle accidents. Yet people still die from speed related accidents. The introduction of 'airbags' has had an impact on reducing the death toll and serious injury toll. Yet people still die from speed related accidents.

The improvements in vehicle design engineering in braking capability, steering assistance under braking, vehicle body crush zones and the like have all given society one thing – comfort in the belief that their car is safe to drive at any speed set by the law. In fact Ralph Nader's tome 'Unsafe at any speed' led not to technological and engineering changes designed to prevent inappropriate speeding, it led to a new wave of mandatory design criteria that enabled cars to be safe 'at speed'.

And therein lays the challenge with current approaches to speed reduction. On the one side of the coin we have media campaigns aimed at changing societal attitudes and on the other side of the coin we have compliance approaches that make cars substantially safer whilst speeding.

One of the results of this paradox is that people have an opportunity to make choices about the speeds at which they drive their cars. The choice is NOT about appropriate rate of travel. The choice is between whether they follow the message of the vast media campaigns imploring them to slow down or whether they believe the manufacturers' advertising campaigns and government design legislation about how safe they will be 'in the event of an accident'.

A quick look at the large majority of advertising campaigns from car manufacturers shows that they understand this paradox absolutely: 'speed' sells and drivers can make up their own minds about the media campaigns that suggest a slower mindset.

### **How Speeding Tickets Encourage Speeding**

Road safety compliance is an expensive issue - a VERY expensive issue. Road safety compliance includes the vast resources of Police forces, Law Courts, Road maintenance and vehicle design requirements.

The idea behind speeding tickets is to penalise those who travel at speeds in excess of the limits established by law makers. But there are lots of cars on the road, lots of drivers, lots of roads and by comparison, so few opportunities 'to be caught'. Drivers in their thousands believe this implicitly if not explicitly. Despite the media campaigns advising of the costs of a

speeding fine and the risks to life and limb, drivers still get to choose the speed at which they drive their cars. People still believe that they are 'unlucky' if they get 'caught' by a camera even with the ever increasing presence of speed and red light camera technology and the accompanying media blitz.

And so speeding fines actually permit speeding to occur. They are an indication that people have a choice as to whether they obey a set speed limit or if they would prefer to drive a bit faster but 'pay a premium' to do so. The more often they choose to drive faster without having to 'pay the premium', the more likely they are to choose to drive faster again.

Speeding tickets even confirm the choices at which we are allowed to speed! Up to say '15kmh an hour over' a set speed limit occurs a 'premium' payment. At 'up to 30 Kmh' over a set speed limit a higher 'premium' is sought. Speeding fines state EXPLICITLY that society permits people to drive at speeds in excess of those 'guidelines' suggested by road signs – speeds up to 30KMH ABOVE the set limit.

If we are serious about reducing speeding the requirement then is to remove from drivers, their ability whether they choose to comply or not.

### **How Traffic Lights Encourage Speeding**

Traffic lights used to be about safe traffic flow management. A system was designed to ensure that sufficient flow of traffic occurred to cater for peak vehicle times. Yet how often do traffic lights have a positive impact on traffic flow rather than a negative impact? In other words the system of traffic management has become less about enabling traffic flow and more about stopping flow.

Anecdotal evidence from drivers is all around us. People are creatures of habit and tend to travel to and from work the same way each day. They travel the same streets to do their shopping, play sport, socialise or go to school. And because of this they 'learn' about traffic flow management and about cycles of traffic light sequences.

Over time a driver recognises patterns in the roads they travel. They approach a common set of lights travelling at the permissible speed and just prior to reaching the intersection, the lights change to red stopping their progress. Or they approach a set of lights and sit for what seems like minutes waiting for a traffic light cycle to work through, even though the road with the green light has little or NO traffic. This 'barrier' to their life occurs each day.

Eventually drivers begin to notice other drivers travelling at speeds above the set limits. The compliant driver gets to observe the consistency with which drivers travelling above the speed limit are NOT impeded by the traffic lights. And so they learn about options and choices. One day the normally compliant driver makes an alternative choice – to travel above the set speed limit in order to 'beat the lights'. The competition has begun! The more often the driver wins the race to the next green light, the more often they will try again. In this way, traffic lights that prevent flow encourage speeding to occur.

### **How Vehicle Manufacturers Encourage Speeding**

The needle of a rev counter jumping dramatically; cars whizzing their way along a winding roads; creating dust storms or gravel plumes as tyres spin. All of these images and more are used by vehicle manufacturers to promote one critical element of the purported appeal of their cars – speed (or the ‘ability’ to speed if the driver ‘chooses’ to do so).

Whilst these iconic advertising images promote speed to help encourage the purchase of the vehicle, the impact is arguably limited after the time at which the vehicle has been purchased. So to ensure that drivers are aware of the potential available to them, vehicle manufacturers insist on one final requirement – a speedometer that suggests the possibility of the vehicle travelling at a speed well beyond those deemed even socially acceptable. Once again the driver is given the choice – to stick with the media messages or to go with the car’s ‘at speed’ safety potential available.

## **Choices – Technological & Societal**

### *Compliance with speeding*

If we are serious about the need to reduce inappropriate speeding then cancelling licences and issuing fines is NOT sufficient. The impact of cancelling licenses is too severe and can have consequences that extend well beyond the ‘punishment’ of the individual driver. The potential job loss of a major bread winner resulting from loss of a driver’s licence has consequences that can impose penalties on people who had nothing to do with the speeding incident. This is a clumsy and heavy handed approach that suggests limited thinking.

Increasing the number of speed detection cameras and red light cameras will also be insufficient for those people with a preference for speeding. The current model is seen by a growing number of parts of society as little more than a revenue raising exercise by governments. We have a taxation system addicted to gambling and we have a taxation system addicted to speeding fines. This places a negative impact on the members of society asked to enforce this compliance approach – the police. The negative impact shifts the perception of police from being enablers of a harmonious society charged with preventing and investigating crimes against persons, to being tax collectors for governments.

Publicly few police would admit to the image challenge they are faced with. They would side with governments by referring to the costs of car accidents to the community both through loss of lives and injury and the negative impacts to health sectors and productivity of transport. Yet privately it is easy to find large numbers of police who feel that their position as revenue raising tax collector is one that impacts negatively on their chosen profession. More police focused on forcing driver compliance and issuing fines is not a sufficient approach whether it is through the increased use of speed detection technology or more police cars on roads detecting speeding drivers and issuing fines.

As society values change and develop, as new sectors of migrant communities grow and as society grapples with increasing have and have nots, police will need to be undertaking a far more important role than catching speeding motorists. We will need all of the resources to focus on negotiating understanding, acceptance and awareness of the vastly different changes in the social landscape. Police will be called upon to fulfil roles in the support and caring of various sectors of society that share very different social, family and business values. The road safety needs will still be important, but we must find a way to better use the resources and skill sets of the members of the force in the areas that have the greatest need.

### *A Technological Approach*

More suitable is to prevent the potential for speeding in the first place and where that is not possible, to restrict drivers to driving in vehicles with a maximum speed limit capability substantially below that available to other drivers.

The idea here is to remove from drivers the choice between heeding the media road safety messages posed by governments, or between the explicit message of ‘safe at speed’ inherent in the compliance laws that force design improvements on vehicles.

So what are some of the potential ideas available to us?

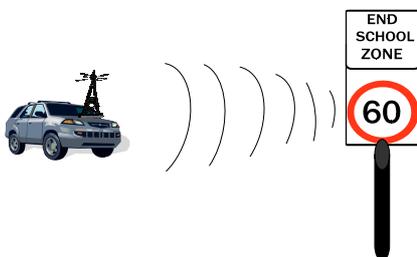
#### *Idea 1 – ‘Automated Speed Compliance’*

One of the best ways of removing the choice and setting speed restrictions is by applying technology not to ‘detection’ but to ‘prevention’. The good news is that the available technology potential already exists.

1. WiFi technology
2. Car Computers
3. Speed Limiters
4. Road signs

Here’s how the technological approach could work -

- All cars would be required to be fitted with a computer chip and receiver.
- The receiver would receive a signal from a road sign transmitting the speed limit for the area.
- The car’s computer chip would make adjustments to the speed limiter potential of the vehicle.



The issue for governments then is about whether they will use their compliance initiatives to remove the problem of inappropriate speed or just maintain the problem through ‘detection’ technologies. The idea suggested above provides significant opportunities for the compliance of speed zones to be automated. The resources of the police forces, law courts and health industry can then be utilised in far more effective ways because cars are prevented from

speeding automatically. This is different from the ‘black box’ idea which is likely to provide evidence AFTER an accident has already occurred due to excessive speed.

The roll out of the electronic speed limiting idea could take place over time and apply initially to all new cars on the roads. The targeting of certain black spot areas could be the first series for the speed limiting transmissions. Over time as more areas become ‘upgraded’, compliance could shift to existing (used) vehicles being retrofitted in order to comply.

#### *Idea Two – ‘Manufacturer Liability for Speed Related Accidents’*

Although less effective over time, this idea could be introduced immediately.

What could be introduced is a law that forces any vehicle manufacturer that uses the notion of ‘speed’, either implicitly or explicitly within their advertising messages, to be held liable for every car accident in which both speed and the vehicle model that used the ‘speed sells’ imagery were present.

In other words, if Manufacturer ‘A’ uses elements of ‘speed’ in their promotional imagery to sell model ‘L’ then in every subsequent case where a Manufacturer A model L vehicle was involved in an accident and the issue of speed was present, that manufacturer would be held liable.

If society is serious about reducing the incidence of speed related vehicle death and injuries then we should address whether the use of ‘speed sells’ imagery is appropriate for vehicle manufacturers in an era where the social and fiscal costs associated with transport accidents are substantial.

#### *Idea Three – ‘Social Enforcement of Legislative Limits’*

On Australian roads there is absolutely no need for a vehicle to have a speedometer that displays speed limit potential above 130 kmh. Even given the Northern Territory’s open speed zones, for the majority of Australian’s the likelihood of going to the Northern Territory and travelling at speeds in excess of 130kmh is miniscule.

So why do we have them? We have them for the same reason that automotive manufacturers use speed related imagery in their advertising – to increase their chances of selling their cars to those people attracted to the idea of speed.

Yet, (repeating the message) if society is serious about reducing the incidence of speed related vehicle death and injuries then we should address whether the use of ‘speed potential’ is appropriate for vehicle manufacturers in an era where the social and fiscal costs associated with transport accidents are substantial.

In this instance the same penalty would apply to manufacturers as suggested in Idea Two. Calls about increased costs by automotive makers are disingenuous – what they are saying is the small costs for changes to the vehicle speedometer is more important than saving a few thousand lives and many, many thousands of injuries. It is an argument that cannot be supported. It might just turn out that Australia’s use of ‘limited number’ speedometers will lead the world.

### *Idea Four – ‘Aligning Traffic Signals’*

In an era when time is becoming more pressing, being stuck at lights when there is no opposing traffic is frustrating. Not only that, the impact on the environment is significant because petrol is still being burned sitting at lights and accelerating from a standstill poses the highest fuel consumption load, meaning more pollution.

The idea requires significant time and investment in traffic flow modelling. Making an adjustment to one area of a traffic flow may create problems elsewhere. The model needs to be looked at as an overall system. The key approach would be to give priority to vehicle traffic that is flowing AWAY from a centralised (busy) area.

And it is likely that drivers would be able to indicate a great many sets of lights which seem to ‘change’ for no real reason and to no positive effect. It may well be that there are enough opportunities to improve the traffic cycles to be more reflective of the actual traffic flow that now exists. Doing so would go some way to alleviate the stress of driving, lower fuel consumption benefiting the environment and reduce the ‘educational’ message that if you speed you’ll ‘beat the lights’.

We may have the ability to prevent speeding. The question looks more about the quantity and quality of will power required to take action. This piece aims to develop further discussion and debate. It is neither definitive nor conclusive. Each of the ideas would require further development and refinement. There are likely to be stakeholders that feel they will ‘lose out’ and those who feel they will ‘win’. The technological and social ability exists for us to enact these ideas. Does our social will power match the purported ‘slow down’ media messages that the various governments send our way? If we are serious about reducing the impacts of speeding on our roads, it might be time we did more than dress things up.

### **About the Author**

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